

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TENNESSEE  
WESTERN DIVISION**

---

MULTILAYER STRETCH CLING FILM	)
HOLDINGS, INC.,	)
	)
Plaintiff,	) JURY TRIAL DEMANDED
	)
v.	)
	)
INTEPLAST GROUP LTD. and AMTOPP	) No. 2:12-cv-2107-WGY-dkv
CORP.;	)
	)
BERRY PLASTICS CORPORATION;	) No. 2:12-cv-2108-WGY-cgc
	)
INTERTAPE POLYMER GROUP, INC.;	) No. 2:12-cv-2109-JPM-cgc
	)
and	)
	)
MSC MARKETING AND TECHNOLOGY,	) No. 2:12-cv-2112-JPM-tmp
INC. d/b/a SIGMA STRETCH FILM, and	)
ALPHA INDUSTRIES, INC.,	)
	)
Defendants.	)

---

**ORDER FOLLOWING CLAIM CONSTRUCTION HEARING**

---

**TABLE OF CONTENTS**

I. Background.....	3
II. Claim Construction Standard.....	4
III. The '055 Patent.....	11
IV. Analysis.....	13
A. The Disputed Claims .....	13
1. Claims 1 and 28 .....	13
2. Claim 6.....	14
3. Claim 7.....	14
4. Claim 10.....	15

5. Claim 23.....	15
6. Claim 24.....	15
7. Claim 32.....	15
B. Claim Scope Disavowal .....	15
1. Prosecution History .....	16
a. First Reexamination .....	20
b. Second Reexamination .....	25
c. Third Reexamination .....	29
2. Analysis .....	30
C. The Disputed Terms .....	33
1. "thermoplastic stretch wrap film" Claim 1 and Claim 28).....	33
2. "layer" (Claim 1 and Claim 28) .....	41
3. "at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins" (element (a) of Claim 1 and element (a) of Claim 28) ....	45
a. "at least one of which having a cling performance of at least 100 grams/inch" .....	46
b. "said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins" .....	48
4. "containing seven <u>separately identifiable</u> polymeric layers, comprising" ('055 Patent, Second Ex Parte Reexamination Certificate (Apr. 7, 2009), Claim 1, ECF No. 1-4 at PageID 26; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4) .....	58

5. "five identifiable inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins"	(element (b) of Claim 1 and element (b) of Claim 28) .....	62
6. "linear low density polyethylene"	(Claim 1 and Claim 28).....	64
a. Branching Architecture and Polymeric Characteristics .....		67
b. Catalysts .....		71
c. Density .....		75
d. Court's Construction .....		82
7. "Metallocene-catalyzed linear low density polyethylene"	(element (b) of Claim 1 and element (b) of Claim 28).....	82
8. Disputed Terms Relating to "melt"	.....	83
a. "melt index" (Claim 6 and Claim 7)	.....	83
b. "melt flow index" (Claim 23); and "melt index ratio" (Claim 28) .....		86
9. "low density polyethylene homopolymers"	(Claim 10).....	90
10. "The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins."	(Claim 24).....	95
11. "resin additive" (Claim 32).....		98
V. Conclusion.....		102
APPENDIX A.....		107

---

**ORDER FOLLOWING CLAIM CONSTRUCTION HEARING**

---

Before the Court is the parties' request for claim construction pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc). On October 17, 2012, the Court consolidated the four remaining patent-infringement actions for the purpose of claim construction and set a consolidated claim construction schedule.<sup>1</sup> (ECF No. 49.)<sup>2</sup> Plaintiff Multilayer Stretch Cling Film Holdings, Inc. ("Plaintiff" or "Multilayer") filed its Opening Claim Construction Brief on December 13, 2012. (Pl.'s Claim Construction Br. ("Pl.'s Br."), ECF No. 53.) Defendants Inteplast Group, Ltd. and AmTopp Corp.; Berry Plastics Corporation; Intertape Polymer Group, Inc.;<sup>3</sup> and MSC Marketing and Technology, Inc., d/b/a Sigma Stretch Film and Alpha Industries, Inc. (collectively, "Defendants") submitted their Opening Claim Construction Brief the same day. (Defs.' Claim

---

<sup>1</sup> The consolidated cases are as follows: Multilayer Stretch Cling Film Holdings, Inc. v. Inteplast Group Ltd., No. 2:12-cv-2107-WGY-dkv; Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp., No. 2:12-cv-2108-WGY-cgc; Multilayer Stretch Cling Film Holdings, Inc. v. Intertape Polymer Group, Inc., No. 2:12-cv-2109-JPM-cgc; and Multilayer Stretch Cling Film Holdings, Inc. v. MSC Marketing & Technology, Inc. d/b/a Sigma Stretch Film, No. 2:12-cv-2112-JPM-tmp

<sup>2</sup> Unless otherwise noted, all ECF citations refer to Multilayer Stretch Cling Film Holdings, Inc. v. MSC Marketing & Technology, Inc., No. 2:12-cv-2112-JPM-tmp.

<sup>3</sup> Multilayer and Defendant Intertape Polymer Group filed their Stipulation of Dismissal on May 16, 2013. (No. 12-cv-2109-JPM-cgc, ECF No. 67.) The Court entered Judgment dismissing with prejudice all claims against Defendant on May 16, 2013. (No. 12-cv-2109-JPM-cgc, ECF No. 68.)

Construction Br. ("Defs.' Br."), ECF No. 54.) Plaintiff filed its Responsive Claim Construction Brief on January 14, 2013. (Pl.'s Resp., ECF No. 57.) Defendants filed their Responsive Claim Construction Brief the same day. (Defs.' Resp., ECF No. 58.) Pursuant to the consolidated schedule, the parties filed a Joint Claim Construction Prehearing Statement on January 22, 2013. (ECF No. 61.) The Court held the claim construction hearing ("the hearing") on January 25, 2013, at which all parties had an opportunity to present their positions. (ECF No. 62; see also Claim Construction Hr'g Tr. ("Hr'g Tr."), Multilayer Stretch Cling Film Holdings, Inc. v. Inteplast Grp. Ltd., No. 2:12-cv-2107-WGY-dkv, ECF No. 79.)

Melissa Hunter Smith, William C. Ferrell, Jr., and James R. Michels were present for Plaintiff Multilayer; John G. Jackson and Jeffrey Granillo were present for Defendant Inteplast Group Ltd. and AmTopp Corporation; Douglas F. Halijan and Jeffrey Cooper Metzcar were present for Defendant Intertape Polymer Group, Inc.; James Kevin Stronski was present for Defendant MSC Marketing and Technology, Inc.; and Daniel Paul Albers was present for Defendant Berry Plastics Corporation.

For the reasons stated herein, the Court construes the claim terms as follows.

## I. Background

This case arises from U.S. Patent No. 6,265,055 (the "'055 Patent"), issued on July 24, 2001, to inventors David Simpson and Terry Jones. ('055 Patent, ECF No. 1-4.) Multilayer is the owner of all rights, title, and interest in the '055 Patent. (See ECF No. 40-11 at PageID 192-196.) The '055 Patent is entitled "Multilayer Stretch Cling Film." ('055 Patent, ECF No. 1-4.) The patent-in-suit relates to a "multi-layer stretch film comprising at least 7 layers and having excellent mechanical properties and stretch film performance." ('055 Patent Abstract, ECF No. 1-4 at PageID 12.)

Plaintiff Multilayer alleges that each Defendant designs, manufactures, or sells stretch-film products that infringe "at least claim 1 of the '055 [P]atent." (See Compl. ¶ 12, No. 12-cv-2107-WGY-dkv, ECF No. 1; Compl. ¶ 11, No. 12-cv-2108-WGY-cgc, ECF No. 1; Compl. ¶ 11, No. 12-cv-2109-JPM-cgc, ECF No. 1; Compl. ¶ 12, No. 12-cv-2112-JPM-tmp, ECF No. 1.)

Defendants raised various defenses, including noninfringement, invalidity, unenforceability, inequitable conduct, and patent misuse. (See Third Am. Answer & Countercl. at 3-9, No. 12-cv-2107-WGY-dkv, ECF No. 81; Am. Answer & Countercl. at 2-6, No. 12-cv-2108-WGY-cgc, ECF No. 59; Answer ¶¶ 15-18, No. 12-cv-2109-JPM-cgc, ECF No. 23; First Am. Answer & Countercl. ¶¶ 15-26, No. 12-cv-2112-JPM-tmp, ECF No. 40.)

Defendants Inteplast Group, Ltd. and Amtopp Corp.; Berry Plastics Corporation; and MSC Marketing and Technology, Inc., also counterclaimed for declarations of noninfringement, invalidity, and unenforceability of the '055 Patent. (See Third Am. Answer & Countercl. at 31-40, 41 ¶¶ B-H, No. 12-cv-2107-WGY-dkv, ECF No. 81; Am. Answer & Countercl. ¶¶ 104-11, No. 12-cv-2108-WGY-cgc, ECF No. 59; First Am. Answer & Countercl. at 25 ¶¶ B-C, No. 12-cv-2112-JPM-tmp, ECF No. 40.)

Before the Court can consider Multilayer's various infringement claims, it is required to construe the scope of the '055 Patent.

## **II. Claim Construction Standard**

"Patent infringement is a two step inquiry. First, the court must construe the asserted claim. . . . Second, the court must determine whether the accused product or process contains each limitation of the properly construed claims." Tessera, Inc. v. Int'l Trade Comm'n, 646 F.3d 1357, 1364 (Fed. Cir. 2011) (alteration in original) (quoting Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1356-57 (Fed. Cir. 2005)) (internal quotation marks omitted), cert. denied, 132 S. Ct. 2707 (U.S. 2012); accord Markman, 52 F.3d at 976 ("The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing."

(citation omitted)). "Claim construction is an issue of law . . . ." Felix v. Am. Honda Motor Co., Inc., 562 F.3d 1167, 1177 (Fed. Cir. 2009) (citing Markman, 52 F.3d at 970-71).

"To the extent possible, claim terms are given their ordinary and customary meaning, as they would be understood by one of ordinary skill in the art in question at the time of the invention." 3M Innovative Props. Co. v. Tredegar Corp., No. 2012-1241, 2013 WL 3984988, at \*4 (Fed. Cir. Aug. 6, 2013) (citing Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc)). "In construing claims, a court seeks to discern the meaning of a particular term used in one or more claims of a patent, based, inter alia, on evidence drawn from the specification, the surrounding claim language, the prosecution history, and relevant extrinsic sources." Trading Techs. Int'l, Inc. v. Open E Cry, LLC, No. 2012-1583, 2013 WL 4610693, at \*7 (Fed. Cir. Aug. 30, 2013). "[I]n interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history. . . ." Microthin.com, Inc. v. SiliconeZone USA, LLC, 377 F. App'x 8, 10 (Fed. Cir. 2010) (per curiam) (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)) (internal quotation marks omitted); accord Markman, 52 F.3d at 978-79. "There is a heavy presumption that claim

terms are to be given their ordinary and customary meaning. Courts are required therefore to 'look to the words of the claims themselves . . . to define the scope of the patented invention.'" Aventis Pharm. Inc. v. Amino Chems. Ltd., 715 F.3d 1363, 1373 (Fed. Cir. 2013) (alteration in original) (citations omitted) (quoting Vitronics, 90 F.3d at 1582); see also Phillips, 415 F.3d at 1314 ("[T]he claims themselves provide substantial guidance as to the meaning of particular claims terms." ).

The claims are interpreted "in light of the intrinsic evidence of record." Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed. Cir. 2002). "[A] construing court does not accord the specification, prosecution history, and other relevant evidence the same weight as the claims themselves, but consults these sources to give the necessary context to the claim language." Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1552 (Fed. Cir. 1997), abrogated on other grounds by Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed. Cir. 1998). Moreover, a court should construe claim terms as having the meaning ascribed to them by "a person of ordinary skill in the art in question at the time of the invention," unless the patent specification or prosecution history indicates a contrary meaning. Phillips, 415 F.3d at 1313; see also N. Telecom Ltd. v. Samsung Elecs. Co., 215 F.3d 1281, 1287 (Fed.

Cir. 2000). There is a "well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art." Phillips, 415 F.3d at 1313.

In determining the meaning to be given to claim terms, the court must read the terms in the context of the specification as it is the patent specification which, by statute, must contain a "full, clear, concise, and exact" description of the invention. 35 U.S.C. § 112(a); accord Phillips, 415 F.3d at 1311, 1313. As a result, claim terms must be construed so as to be consistent with the specification. Phillips, 415 F.3d at 1315, 1316 ("The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." (quoting Renishaw PLC v. Marposs Società per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (internal quotation marks omitted))). "The specification may assist in resolving ambiguity where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." Teleflex, 299 F.3d at 1325. "The specification is fundamental to claim construction, as it is the single best guide to the meaning of a disputed term." Trading Techs. Int'l, 2013 WL 4610693, at \*7 (quoting Phillips,

415 F.3d at 1315) (internal quotation marks omitted); see also Teleflex, 299 F.3d at 1325 (quoting Vitronics, 90 F.3d at 1582).

The specification may use a claim term in a way that differs from its ordinary meaning; in such instances, the patentee is deemed to have acted as his own lexicographer, and the ordinary meaning of the language must be rejected. Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1204 (Fed. Cir. 2002). "Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification." 3M Innovative Props., 2013 WL 3984988, at \*5 (citing Phillips, 415 F.3d at 1315-16). "[T]he written description in such a case," however, "must clearly redefine a claim term 'so as to put a reasonable competitor or one reasonably skilled in the art on notice that the patentee intended to so redefine that claim term.'" Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc., 214 F.3d 1302, 1307 (Fed. Cir. 2007) (quoting Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1357 (Fed. Cir. 1999)).

Although claims must be read in view of their specification, "limitations discussed in the specification may not be read into the claims." 3M Innovative Props., 2013 WL 3984988, at \*4. The United States Court of Appeals for the Federal Circuit has repeatedly cautioned against limiting the scope of a claim to the preferred embodiment or specific

examples disclosed in the specification. See Arlington Indus., Inc. v. Bridgeport Fittings, Inc., 632 F.3d 1246, 1254 (Fed. Cir. 2011) ("[E]ven where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or[] expressions of manifest exclusion or restriction." (quoting Martek Biosciences Corp. v. Nutrinova, Inc., 579 F.3d 1363, 1381 (Fed. Cir. 2009) (internal quotation marks omitted))). In some circumstances, however, "a patentee's consistent reference to a certain limitation or a preferred embodiment as 'this invention' or the 'present invention' can serve to limit the scope of the entire invention, particularly where no other intrinsic evidence suggests otherwise." Absolute Software, Inc. v. Stealth Signal, Inc., 659 F.3d 1121, 1136 (Fed. Cir. 2011). Similarly, a court should not read the specification to expand the scope of the claims. Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co., 285 F.3d 1046, 1052 (Fed. Cir. 2002) (per curiam) (citing McClain v. Ortmayer, 141 U.S. 419, 424 (1891)) ("The claim is the measure of [that patentee's] right to relief, and, while the specification may be referred to limit the claim, it can never be made available to expand it.").

Beyond the specification, "[t]he meaning of the claim language is informed, as needed, by the prosecution history."

3M Innovative Props., 2013 WL 3984988, at \*5 (citing Pass & Seymour, Inc. v. Int'l Trade Comm'n, 617 F.3d 1319, 1327 (Fed. Cir. 2010)); see also Markman, 52 F.3d at 980. "This 'undisputed public record' of proceedings in the [United States] Patent and Trademark Office [("PTO" or "USPTO")] is of primary significance in understanding the claims." Markman, 52 F.3d at 980; accord Phillips, 415 F.3d at 1317 ("Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent."). "[P]rosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be."

Plantronics, Inc. v. Aliph, Inc., No. 2012-1355, 2013 WL 3927619, at \*5 (Fed. Cir. 2013) (alteration in original) (quoting Phillips, 415 F.3d at 1317) (internal quotation marks omitted). A court "does not rely on the prosecution history to construe the meaning of the claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal." 3M Innovative Props., 2013 WL 3984988, at \*5 (citing Trading Techs. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1352 (Fed. Cir. 2010)).

In addition to the intrinsic record, the court may also consider extrinsic sources such as dictionaries, encyclopedias, treatises, inventor testimony, and expert testimony to assist it in understanding the technology at issue or in determining the meaning or scope of terms in a claim. Phillips, 415 F.3d at 1317-18; see also Aqua-Aerobic Sys., Inc. v. Aerators, Inc., 211 F.3d 1241, 1244-45 (Fed. Cir. 2000); Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1579 (Fed. Cir. 1996). Although such evidence is generally considered less reliable than the intrinsic record, the court is free to consider it and may do so at any stage of its inquiry. Phillips, 415 F.3d at 1318-19; see also Free Motion Fitness, Inc. v. Cybex Int'l, Inc., 423 F.3d 1343, 1348-49 (Fed. Cir. 2005). "Courts may rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." 3M Innovative Props., 2013 WL 3984988, at \*4.

### **III. The '055 Patent**

The '055 Patent "relates to multi-layer stretch cling films having at least seven individual layers in the film composition offering acceptable cling performance, good balance of strength and good elongation properties." ('055 Patent col. 1:4-7, ECF No. 1-4.) The '055 Patent relates to "commercial packaging art" where certain articles or bundles of articles are "packaged

using so called stretch cling film in a stretch wrapping technique." (Id. col. 1:11-14.) The technique involves a "thin web of film" being "stretched and applied under tension around the articles to be wrapped or bundled" until fully wrapped, then "the film attempts to relax and thus applies a compressive force on the bundled articles prohibiting movement." (Id. col. 1:15-19.) As explained in the '055 Patent,

The present invention is a novel multi-layer stretch film comprising at least 7 layers and having excellent mechanical properties and stretch film performance when compared to stretch films made using fewer than seven layers.

The film comprises two outer, or skin layers that have moderate to high controlled cling and low blocking characteristics, at least five internal layers to assist in producing mechanical strength and stretchability. The resins used in the film composition include polypropylene ("PP"), ethylene propylene copolymers, low density polyethylene ("LDPE"), linear low density polyethylene ("LLDPE"), medium density polyethylene ("MDPE"), high density polyethylene ("HDPE"), metallocene-catalyzed polyethylene ("mPE"), very low density polyethylene ("VLDPE"), and/or ultralow density polyethylene ("ULDPE"). Also, at least two of the resins may be blended to achieve a desired range of physical or mechanical properties of the final film product. The blend ratios may range from 99:1 to 1:99. More preferably, the blend ratios range from 95:5 to 5:95. Even more preferably, the blend ratios range from 90:10 to 10:90.

(Id. col. 1:51-2:3.)

## **IV. Analysis**

### **A. The Disputed Claims**

The parties disagree about the proper construction of language found in eight claims in the '055 Patent. The claims containing disputed language are as follows, with the contested language underlined.

#### **1. Claims 1 and 28**

Claim 1 and Claim 28 are the two independent claims of the '055 Patent, on which the remaining claims depend.

1. A multi-layer, thermoplastic stretch wrap film containing seven separately identifiable polymeric layers, comprising:

(a) two identifiable outer layers, at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins, said resins being homopolymers, copolymers, or terpolymers, or ethylene and alpha-olefins; and

(b) five identifiable inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins; said resins are homopolymers, copolymers, or terpolymers, or ethylene and C<sub>3</sub> to C<sub>20</sub> alpha-olefins;

wherein each of said two outer layers and each of said five inner layers have different compositional properties when compared to a neighboring layer.

28. A multi-layer, thermoplastic stretch wrap film containing seven polymeric layers, comprising:

(a) two outer layers, at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins, said resins being homopolymers, copolymers, or terpolymers, of ethylene and alpha-olefins; and

(b) five inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins; said resins being homopolymers, copolymers, or terpolymers, of ethylene and C<sub>3</sub> to C<sub>20</sub> alpha-olefins,

wherein at least one of said inner layers comprises a metallocene catalyzed linear low density polyethylene resin with a melt index of 0.5 to 3 dg/min and a melt index ratio of 16 to 80; and wherein each of said two outer layers and each of said five inner layers have different compositional properties when compared to a neighboring layer.

## 2. Claim 6

6. The multi-layer, thermoplastic stretch wrap film of claim 1, wherein the resin melt index for each outer layer is 0.2 to 10 dg/min [decigrams per minute].

## 3. Claim 7

7. The multi-layer, thermoplastic stretch wrap film of claim 1, wherein the resin melt index for each inner layer is 0.5 to 10 dg/min [decigrams per minute].

**4. Claim 10**

10. The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one said inner layer comprises low density polyethylene homopolymers, wherein said low density polyethylene homopolymers have a melt index of between 0.2 to 10 dg/min [decigrams per minute]; and a resin density of between about 0.86 to 0.94 g/cc [grams per cubic centimeter].

**5. Claim 23**

23. The multi-layer, thermoplastic stretch wrap film of claim 1, wherein the melt flow index is between 0.2 and 10 dg/min [decigrams per minute].

**6. Claim 24**

24. The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins.

**7. Claim 32**

32. The film of claim 1, wherein the compositional property is the presence of a resin additive.

**B. Claim Scope Disavowal**

The Court first addresses Defendants' argument that the patentee of the '055 Patent disclaimed portions of the scope of its claims throughout the patent-prosecution process.

Defendants argue the patentee disavowed the scope of the '055 Patent's claims by amendment of the independent claims, which eventually resulted in the granting of the patent.

(Defs.' Resp. at 4-11, ECF No. 58.) Specifically, Defendants argue the patentee "substantially narrowed" the independent claims of the '055 Patent "by amendment to distinguish over

prior art disclosing other films, including seven-layer films" during the three reexaminations of the patent. (Id. at 4.) According to Defendants, this "narrowing" included excluding the number of extruders in the feedblock, the presence of adjacent layers of the same resin in the stretch-wrap film, and processing conditions from the scope of the '055 Patent. (Id. at 5-10.)

Multilayer argues the patentee did not unambiguously disavow any scope of the independent claims in the '055 Patent. (Pl.'s Resp. at 11-17, ECF No. 57.) To the contrary, Multilayer contends the patentee simply clarified what those claims covered with regard to the separately identifiable layers and how those layers could be identified.

### **1. Prosecution History**

The Court reviews the prosecution history to determine whether the scope of the claims was disavowed. In brief, the prosecution history is as follows. Patent Application 09/419,909 (the application for the '055 Patent) was filed on October 13, 1999. (ECF No. 55-4 at PageID 862.) The '055 Patent was issued on July 24, 2001. ('055 Patent, ECF No. 1-4 at PageID 12.) On August 28, 2002, the first ex parte reexamination was granted. (ECF No. 55-6 at PageID 1088-89.) After rejection of the application and an appeal, the Board of Patent Appeals and Interferences ("BPAI") reversed the

examiner's rejection on March 30, 2006. (ECF No. 55-9 at PageID 1329-30.) An Ex Parte Reexamination Certificate was issued on Jan. 2, 2007. (First Ex Parte Reexamination Certificate ("First Reexam. Cert."), ECF No. 1-4 at PageID 23-24.) On February 21, 2007, a second ex parte reexamination was granted. (ECF No. 55-11 at PageID 1488.) After rejection, appeal, and amendment, the Examiner accepted the claims on December 23, 2008. (ECF No. 55-14 at PageID 1818.) A second Ex Parte Reexamination Certificate was issued on April 7, 2009. (Second Ex Parte Reexamination Certificate ("Second Reexam. Cert."), ECF No. 1-4 at PageID 25-26.) A Certificate of Correction, correcting missing language in Claim 1 of the Second Ex Parte Reexamination Certificate, was issued on July 14, 2009. (Certificate of Correction, ECF No. 1-4 at PageID 21-22.) The third and final ex parte reexamination was granted on April 15, 2010. (See ECF No. 55-16 at PageID 1989, 1991.) After rejection, the examiner reversed the rejection and found the '055 Patent valid on May 24, 2011. (ECF No. 55-21 at PageID 2378.) A third Ex Parte Reexamination Certificate was issued on August 2, 2011. (Third Ex Parte Reexamination Certificate ("Third Reexam. Cert."), ECF No. 1-4 at PageID 27-28.)

"The doctrine of prosecution disclaimer attaches where an applicant, whether by amendment or by argument, 'unequivocally disavowed a certain meaning to obtain his patent.' " Schindler

Elevator Corp. v. Otis Elevator Co., 593 F.3d 1275, 1285 (Fed. Cir. 2010) (quoting Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003)). The Court looks to the prosecution history of the patent to determine whether prosecution disclaimer applies as the prosecution history "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. "[A]n amendment that clearly narrows the scope of a claim, such as by the addition of a new claim limitation, constitutes a disclaimer of any claim interpretation that would effectively eliminate the limitation or that would otherwise recapture the claim's original scope." Schindler Elevator Corp., 593 F.3d at 1285.

"[W]hile the prosecution history can inform whether the inventor limited the claim scope in the course of prosecution, it often produces ambiguities created by ongoing negotiations between the inventor and the PTO. Therefore, the doctrine of prosecution disclaimer only applies to unambiguous disavowals." Grober v. Mako Prods., Inc., 686 F.3d 1335, 1341 (Fed. Cir. 2012), reh'g denied (Sept. 14, 2012). The Federal Circuit has defined "unambiguous disavowals" as those that "clearly and unmistakably disclaim[] claim scope or meaning." Id. at 1342.

"Prosecution disclaimer does not apply . . . if the applicant simply describes features of the prior art and does not distinguish the claimed invention based on those features."

Computer Docking Station Corp. v. Dell, Inc., 519 F.3d 1366, 1375 (Fed. Cir. 2008).

As originally filed on October 13, 1999, Claim 1 of the 09/419,009 Patent Application claimed "A multi-layer, thermoplastic stretch film wrap containing seven polymeric layers," with no express limitations as to whether the layers were the same or different compositions. (ECF No. 55-4 at PageID 862.) On March 21, 2001, the patentee sent a Preliminary Amendment and Remarks to the USPTO noting that no Office Action had been "mailed in connection with this Application," and that "[w]ith the exception of claim 10, all of the amendments [were] for clarification purposes and to put the claims in a better format for issue." (ECF No. 55-5 at PageID 968.) Regarding Claim 10, the patentee amended the "percentage weight of the outer layers," which was supported in the specification, therefore no "new matter" was added by these amendments. (Id.)

On March 26, 2001, the Notice of Allowance was sent. In the Notice of Allowance, the Patent Examiner ("Examiner") found no prior-art references that "have at least seven layers as claimed." (ECF No. 55-5 at PageID 989.) The patent issued on July 24, 2001. ('055 Patent, ECF No. 1-4.)

**a. First Reexamination**

The first ex parte reexamination was granted on August 28, 2002, based on the existence of prior art, namely U.S. Patent No. 5,756,219 (the "Miro Patent" or "Miro et al.") combined with U.S. Patent No. 5,273,809 (the "Simmons Patent"), that created a "substantial new question of patentability," see 35 U.S.C. § 304 ("If, in a determination made under [a request for reexamination], the Director finds that a substantial new question of patentability affecting any claim of a patent is raised, the determination will include an order for reexamination of the patent for resolution of the question."). (See ECF No. 55-6 at PageID 1088-89.) Additionally, the Examiner stated that "Miro et al. combined with Simmons in view of [U.S. Patent No. 5,814,399 ("Eichbauer")] raises a substantial new question of patentability as to claims 10, 21, 24 and 28 of [the '055 Patent]." (Id. at PageID 1089.)

In the first reexamination, the patentee attempted to distinguish the '055 Patent from the Miro Patent by noting that the Miro Patent taught a stretch-wrap film having the "transverse layered geometry: A/C/B/B/C/A," which resulted in a five-layer film because the "consecutive lettered compositions (i.e., B/B/B . . . ) homogenize . . . to form one homogeneous layer that is consistent throughout the consecutive letters (representing the same compositions)." (ECF No. 55-6 at PageID

1100-01.) Additionally, the patentee argued that “[o]ne of ordinary skill in the art would understand from the examples that Miro et al. used seven or more extruders in the manufacture of 3, 4, or 5 layer stretch wrap films.” (Id. at PageID 1102.) The Examiner determined, however, that Claim 1 of the ‘055 Patent was not patentable over the Miro Patent: “claim 1 [of the ‘055 Patent] does not require adjacent layers of different composition, [sic] the claimed seven layers reads on all layers of the same composition and formed by co-extrusion[,] therefore[,] based on patentee’s argument[,] the patent claim 1 having seven layers reads [on a] single compositional layer.” (ECF No. 55-7 at PageID 1146.)

In response, the patentee amended Claim 1 to state, “A multi-layer, thermoplastic stretch wrap film containing seven separately identifiable polymeric layers.” (Id. at PageID 1159.) The patentee noted that “this Amendment would discuss the deficiencies of the Miro et al. patent,” and the patentee again argued that the Miro Patent taught a five-layer film, though it has a “transverse geometry” of seven layers (i.e., A/C/B/B/C/A). (Id. at PageID 1168-70.) The patentee argued that the term “transverse layered geometry,” as used in the Miro Patent, indicated the source of the resulting film, or, “what arrangement multiple compositions are fed into a feedblock” to produce the final film. (Id. at PageID 1173.) The term

"transverse layered geometry," as used in the Miro Patent, does not describe the resulting structure of a stretch-wrap film with seven distinct/identifiable layers of different chemical composition. (*Id.* at PageID 1173.) In response to the Examiner's rejection that concluded the '055 Patent was anticipated by the Miro Patent, the patentee stated:

To better understand the argument against the anticipation rejection, the Patentees believe it to be beneficial to specifically point out the distinction between "structural" and "compositional" layers. The stretch wrap film claimed by the Patentees has seven structurally identifiable layers, but it is not important whether it has seven compositionally different layers. In other words, the claimed stretch wrap film may be represented by both of the following: (1) A/A/A/A/A/A/A, a film having seven structurally identifiable layers which are not compositionally different (i.e., it may be described as having seven structural layers, but only one compositional layer); and (2) A/B/C/D/E/F/G, a film having seven structurally distinct layers which are also compositionally different (i.e., it may be described as having seven structural layers and seven compositional layers).

(*Id.* at PageID 1172.)

The amended claims were again rejected in the Office Action in Ex Parte Reexamination of June 8, 2004, as the patentee did "not point[] out where the support for these limitations can be found in the originally filed Patent specification." (ECF No. 55-8 at PageID 1239.) Regarding the Miro Patent as prior art, the Examiner rejected the amended claims and concluded that "Miro et al. does not disclose that the 'B/B/B' layers

homogenize." (Id. at PageID 1241.) The Examiner stated that the '055 Patent, as originally filed, did not claim that its "7-layer film is made using [a] seven-layer feedblock die." (Id.) Additionally, the Examiner concluded that the '055 Patent "reads on 7-layer film having all layers of [the] same composition," and noted that the specification did not indicate how such a film with layers of the same composition would not "bond together" and "create a single layer having unitary composition." (Id.)

In the Appeal Brief filed April 8, 2005, the patentee reiterated that the Miro Patent's use of letters representing seven layers "is only a precursor to the final film product." (Id. at PageID 1269.) He continued, "[S]uch a series of seven letters does NOT represent seven identifiable structural layers in a final film product, rather each of the seven letter [sic] (e.g., A/C/B/B/C/A) refers to separate sources of a given composition (i.e., the arrangement in which multiple compositions are fed in a feedblock)." (Id.)

In the Examiner's Answer, mailed May 27, 2005, the Examiner withdrew his rejections relating to the claims being unpatentable for failing to comply with the written description requirement. (Id. at PageID 1285.) The Examiner maintained the rejection of Claim 1 under 35 U.S.C. § 102(b), however, as being

anticipated by the Miro Patent for the same reasons as noted above. (*Id.* at PageID 1286, 1288-89.)

In the Reply Brief to the Examiner's Answer, filed July 29, 2005, the patentee reiterated the position that the '055 Patent as amended overcame the Miro Patent, and stated that "the Examiner is clearly basing his rejection on 'process' steps and not addressing 'product' claim features. . . . However, there are no process claims at issue." (ECF No. 55-9 at PageID 1305.)

Additionally, the patentee stated,

Since the Patentee's [sic] do not claim a method, the issue is whether or not the claimed film is anticipated. The product claims of the present invention must distinguish over prior art in terms of structure, while on the other hand, a method claim covers an act or series of acts and from the standpoint of patentability must distinguish over the prior art in terms of steps.

(*Id.* at PageID 1306 (citation omitted).)

The BPAI issued its Decision of Appeal on March 30, 2006, wherein the BPAI reversed the final rejection of the Examiner and stated,

Our own review of the claim language and the specification persuades us that the plain meaning of the term "layer," as recited in the claims and as originally disclosed in the specification, requires that the layers be physically distinguishable, i.e., "identifiable," from one another. Although all of the working examples and most of the hypothetical examples distinguish layers by composition, we observe that certain passages in the specification are ambiguous in this regard, and appear to permit physical distinctions, rather than compositional distinctions, to make one layer "identifiable" or distinguishable

from its neighbors. . . . [T]he claims and the disclosure make clear that the layers are not arbitrary divisions, but reflect physical reality.

(Id. at PageID 1323-24.) The BPAI also reversed the Examiner's rejection of the '055 Patent as it found the Examiner did not explain the basis for his conclusion that the three "B/B/B" layers of the Miro Patent "remain three structural layers in the finished product." (Id. at PageID 1328.) The first Ex Parte Reexamination Certificate was issued for the amended patent on January 2, 2007. (Id. at PageID 1401-02; First Reexam. Cert., ECF No. 1-4 at PageID 23-24.)

**b. Second Reexamination**

A second reexamination was requested on November 28, 2006, based on new declarations. (See ECF No. 55-10 at PageID 1418-22.) On February 21, 2007, the request was granted with regard to prior art, namely the Miro Patent in view of U.S. Patent No. 5,749,202 (the "'202 Patent" or "Eichbauer '202"), which raised substantial new questions of patentability regarding Claim 1 and other claims in the '055 Patent. (ECF No. 55-11 at PageID 1488-91.) On reexamination, the Office Action of September 21, 2007, stated that Claim 1 was again rejected "as being anticipated by [the Miro Patent]" and by additional evidence provided by the additional declarations. (Id. at PageID 1553.) The Examiner stated the new declarations "provide[d] the evidence which the Board found lacking in the previous reexamination, i.e., that

the three B/B/B layers remain three structural layers in the finished product." (*Id.* at PageID 1554 (citing Mount Decl., ECF No. 55-10 at PageID 1424-33; Cloeren Decl., ECF No. 55-10 at PageID 1434-38).) The Examiner determined that the Miro Patent, though it only contemplated one compositional layer, would have "seven structurally identifiable layers" because it "was produced from a seven-layer feedblock," in contravention to the patentee's argument that the '055 Patent was valid because it covered "a film having seven structurally identifiable layers which are not compositionally different." (*Id.* at PageID 1554-55 (citing Patentee Appeal Br., ECF No. 55-8 at PageID 1265).)

The Examiner also stated, "It is clear from patent owner's arguments [in his previous appeal] and the Jones Declaration that the determining factor in the number of 'separately identifiable' layers is the number of layers in the feedblock." (*Id.* at PageID 1560.)

To overcome the Examiner's rejection, the patentee amended Claim 1 on January 22, 2008, to read: "wherein each of said two outer layers and each of said five inner layers have different compositional or mechanical properties when compared to a neighboring layer." (ECF No. 55-12 at PageID 1598 (emphasis added).) The patentee also submitted the Declaration of Andrew Christie to support the argument that the '055 Patent did not read on the Miro Patent, which stated,

[M]aterial properties are dependent on the processing work (screw shear energy input) and heat energy input (extruder temperature settings) even when you have a common material designation but it is supplied from a different extruder it can have significantly different properties layer to layer due to a different processing history. This would not be possible in [the Miro Patent] where the B/B/B pre-cursor structure all comes from the same extruder and therefore the same processing history.

(ECF No. 55-12 at PageID 1659.)

On reexamination on August 10, 2008, Claim 1 was rejected for indefiniteness "for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." (ECF No. 55-13 at PageID 1693.) Regarding the amendment, the Examiner stated,

[T]he recitation of "different mechanical properties" is considered the same as, and thus redundant, [sic] to the recitation of different composition than a neighboring layer. . . . Specifically, the specification fails to define what constitutes different mechanical properties. Given that "products of identical chemical composition can not [sic] have mutually exclusive properties," it would be expected that adjacent film layers having the identical composition would have the same properties.

(Id. (citation omitted) (quoting In re Spada, 911 F.2d 705, 709 (Fed. Cir. 1990))).) The Examiner further recognized the Christie Declaration, but noted,

[T]he ['055 Patent] specification does not teach or disclose the use of multiple extruders having a common material or that said extruders should [sic] operated under different process conditions so as to yield different mechanical properties as compared to an otherwise identical compositional film layer. Nor does the ['055 Patent] specification define how much

(e.g., 1%, 2% or more) identical composition layers would differ in mechanical properties in order to be considered different "identifiable" layers.

(Id. at PageID 1694.) As a result, the amended Claim 1 was rejected as indefinite.<sup>4</sup> (Id.)

Following this rejection, patentee filed another amendment on November 10, 2008, removing the rejected term "mechanical" from Claims 1 and 28, and adding dependent Claims 29 through 35. (ECF No. 55-13 at PageID 1732-41.) The patentee stated the amendments were added to "clarify the . . . redundancy issues discussed during the interview and in the previous rejection." (Id. at PageID 1745.) Additionally, the "[n]ewly added claims 29-35 were discussed during the interview and are not believed to add new issues that would require any additional search on [sic] consideration on behalf of the Examiner. These claims were also added to further clarify the chemical or mechanical properties redundancy issues." (Id.) Regarding the Christie Declaration, the patentee stated, "there is nothing in [the Miro Patent] to indicate a different processing history with respect to each neighboring 'B/B/B' designation." (Id. at PageID 1748.)

The amendments were again rejected and the patentee appealed. (ECF No. 55-14 at PageID 1785.) In the subsequent

---

<sup>4</sup> Claim 28, which also contained the amended language, was also rejected. Additionally, the claims were rejected under 35 U.S.C. § 103(a) as being "unpatentable over Miro et al. . . . in view of . . . Eichbauer" (ECF No. 55-13 at PageID 1697) and rejected under 35 U.S.C. § 103(a) as "unpatentable" over Eichbauer (id. at PageID 1699-1700).

reexamination of December 23, 2008, the Examiner accepted the claims. The reasons for patentability stated,

The amended claims are directed to stretch wrap film containing seven polymeric layers wherein each of said seven layers have different compositional properties when compared to a neighboring layer. The closest prior art (Miro et al. and Eichbauer '202) do not teach or make obvious a stretch wrap film containing seven polymeric layers wherein each of said seven layers have different compositional properties when compared to a neighboring layer.

(*Id.* at PageID 1818.) The second Ex Parte Reexamination Certificate for the amended patent was issued on April 7, 2009. (*Id.* at PageID 1824-26; Second Reexam. Cert., ECF No. 1-4 at PageID 25-26.)

### **c. Third Reexamination**

A third reexamination was requested on November 25, 2009, in view of a newly discovered research disclosure. (*See* ECF No. 55-16 at PageID 1919-59 (containing the replacement request for reexamination).) The request was granted on April 15, 2010 (*see id.* at PageID 1989, 1991), and the claims were initially rejected on August 27, 2010 (*see* ECF No. 55-17 at PageID 2018, 2020, 2022-26). On May 24, 2011, the Examiner reexamined the August 27, 2010, rejection and reversed based on the patentee's "reduction of practice of the claimed invention prior to March 10, 1999." (ECF No. 55-21 at PageID 2378.) As a result, the Examiner found that the newly discovered research disclosure was not prior art, and therefore found the '055 Patent was valid as

amended. (Id.) The third Ex Parte Reexamination Certificate was issued on August 2, 2011. (Third Reexam. Cert., ECF No. 1-4 at PageID 27-28.)

## 2. Analysis

Multilayer argues that the patentee removed only the redundant language, namely "mechanical," and added Claims 29 through 35 – which clarify which "compositional properties" may vary among the layers – in order to achieve patentability.

(Pl.'s Resp. at 14, ECF No. 57.) Multilayer asserts that "the claims were clarified and not narrowed, [therefore] there was no disavowal of claim scope." (Id.) Multilayer argues that "[t]he proper scope of the claims must include films having layers that differ based on their composition (the polymer resin(s) used) and based on their arrangement (the processing conditions implemented)." (Id. at 15.) Multilayer notes that the inclusion of dependent Claims 29 through 35 proves that the claims were not disavowing processing conditions as a means of distinguishing one layer from an adjacent layer. (Id. at 14.) "Compositional properties," such as tensile strength, melt index, density, or the presence of a resin additive, "relate not only to properties unique to the polymer resin(s) used in each layer but also to properties owing to the processing conditions implemented." (Id. at 16.) As a result, and in order to read the dependent claims in a manner consistent with the independent

claims from which they depend, Multilayer argues it did not disavow any scope of the claims.

Defendants argue that Multilayer is simply attempting to broaden the scope of its claims that were previously disavowed in order to achieve patentability. Regarding the issue of whether the "compositional properties" can include processing conditions for the resins, Defendants argue that the intrinsic evidence, namely the '055 Patent language itself, does not contemplate differences in processing to distinguish the compositional properties of its layers. (Defs.' Resp. at 24, ECF No. 58.) Instead, Defendants claim that the '055 Patent discusses the "inherent properties of the resins in the constituent layers of a film . . . not properties that are acquired during processing." (Id. (citing '055 Patent col. 8:45-9:33, ECF No. 1-4).)

Having reviewed the prosecution history, the specification, and the testimony of the parties at the hearing, the Court finds that the patentee did not make an "unambiguous" disavowal of claim scope during prosecution. See Grober, 686 F.3d at 1341-42.

Nevertheless, the Court finds that the amended claims of the '055 Patent are more limited than Multilayer contends. The prosecution history indicates a significant back-and-forth between the patentee and the Examiner's Office focusing on the

way layers were to be distinguished in the seven-layer stretch-film wrap. As the patentee sought to retain its original claim scope that the resins could be compositionally the same and structurally different, and as the BPAI recognized the '055 Patent taught layers that are "physically distinguishable," the amendment to Claim 1 that removed "mechanical" became necessary. The removal of "mechanical properties" in the amended claims indicates to the Court that the '055 Patent does not teach distinguishing properties by the processing conditions under which each resin was extruded. (See Office Action in Second Ex Parte Reexamination at PageID 1693, ECF No. 55-13 ("[T]he ['055] patent specification does not teach or disclose the use of multiple extruders having a common material or that said extruders should [sic] operated under different process conditions so as to yield different mechanical properties as compared to an otherwise identical compositional film layer.").) Accordingly, the language in the '055 Patent specification does not contemplate differences in processing conditions as a means of distinguishing layers. As such, Christie's declaration regarding processing conditions (see ECF No. 55-12 at PageID 1653-60) is inapposite.

The language of the '055 Patent states that the resins are selected for their "specific film end-use properties," not that the resins are processed to create the specific end-use

property. (See '055 Patent col. 2:44, 49, 54, ECF No. 1-4.) Additionally, Claims 29 through 35 do not contemplate differences in processing conditions as they are subject to the scope of the independent claim (Claim 1) from which they depend. See 32 U.S.C. § 112(d) ("[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.") Because Claim 1 does not contemplate differences in processing conditions, dependent Claims 29 through 35 cannot, either. Furthermore, the patentee specifically stated during the first reexamination that the '055 Patent did "not claim a method," but rather a product that must be "distinguish[ed] over prior art in terms of structure." (ECF No. 55-9 at PageID 1306.)

### C. The Disputed Terms

The Court will address the disputed terms in turn.

#### 1. "thermoplastic stretch wrap film" (Claim 1 and Claim 28)

Both independent claims, Claims 1 and 28, contain a preamble that claims "[a] multilayer, thermoplastic stretch wrap film." ('055 Patent col. 9:41-42, ECF No. 1-4; id. col. 12:45-46.) Multilayer argues that as a preamble, the term "thermoplastic stretch wrap film" is a limitation that excludes any films that do not have suitable elastic or cling properties. Multilayer proposes that the preferred construction of this term

"should make explicit that the '055 patent is limited to films having appropriate cling and elastic properties such that they may be used as stretch wrap films." (Pl.'s Br. at 13, ECF No. 53.) Multilayer contends that there is "little doubt that 'stretch wrap' is a specific type of thermoplastic film with specific characteristics," and that the patent contains no alternate application for the film. (Pl.'s Resp. at 3, ECF No. 57.)

Defendants argue that the term is not a limitation because it "merely describes a purpose or use for the purported invention of the '055 Patent and thus should not be treated as limiting the claims." (Defs.' Br. at 6, ECF No. 54.) Defendants contend that the term "does not 'recite[] essential structure or steps,' nor is it necessary to 'give life, meaning, and vitality to the claim.'" (Defs.' Resp. at 11, ECF No. 58 (quoting Am. Med. Sys., Inc. v. Biolitec, Inc., 618 F.3d 1354, 1358 (Fed. Cir. 2010))). Instead, Defendants claim the "body of claims 1 and 28 . . . are directed to essential structure." (Id. at 11.) Defendants argue that Claims 1 and 28 describe "a structurally complete invention," therefore the term "thermoplastic stretch wrap film" is "duplicative" of those properties described and should not be considered a limitation. (Defs.' Br. at 6-7, ECF No. 54 (citing Symantec Corp. v. Computer Assocs. Int'l, Inc., 522 F.3d 1279, 1288-89 (Fed. Cir.

2008) ("[I]f [the preamble] is reasonably susceptible to being construed to be merely duplicative of the limitations in the body of the claim (and was not clearly added to overcome a rejection), we do not construe it to be a separate limitation.")) .)

Regarding preambles as limitations, the Court has previously stated,

A claim preamble has the import that the claim as a whole suggests for it. If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality to the claim, then the claim preamble should be construed as if in the balance of the claim.

Lectrolarm Custom Servs., Inc. v. Vicon Indus., Inc., No. 03-2330 MA/A, 2005 WL 2177000, at \*7 (W.D. Tenn. Sept. 2, 2005) (quoting Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed. Cir. 1999)) (internal quotation marks omitted), aff'd sub nom. Lectrolarm Custom Sys., Inc. v. Vicon Indus., Inc., 489 F. App'x 463 (Fed. Cir. 2012); see also In re Paulsen, 30 F.3d 1475, 1479 (Fed. Cir. 1994) ("[T]erms appearing in a preamble may be deemed limitations of a claim when they 'give meaning to the claim and properly define the invention.'") (quoting Gerber Garment Tech., Inc. v. Lectra Sys., Inc., 916 F.2d 683, 688 (Fed. Cir. 1990))). "[C]lear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim

limitation because such reliance indicates use of the preamble to define, in part, the claimed invention." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002); accord Am. Med. Sys., Inc., 618 F.3d at 1359; Symantec Corp., 522 F.3d at 1288-89.

Reviewing the prosecution history, the Court finds support that the preamble is a limitation. The prosecution history indicates that the BPAI relied on this preamble to limit the '055 Patent and to distinguish it from prior art. (See ECF No. 53-8 at PageID 498-99.) The BPAI stated,

[W]e consider a second issue, namely, the weight to be given to the preamble term "thermoplastic stretch wrap" that modifies the subject of the claim, "film." (We observe that throughout the prosecution of this reexamination, both the patent owner and the examiner appear to have assumed that claims only cover films that are thermoplastic stretch wrap films, i.e., that have appropriate elastic properties.) The specification states that such films are the subject of the invention, and teaches specifically that "[t]he five inner layers are used for mechanical strength and stretchability." Although only claim 17, which depends on claim 1, appears to recite an elastic property (tensile elongation) of the films that appears to be directly related to stretch wrap properties, given the exclusive focus of the disclosure on stretch cling films, we hold that the preamble term "thermoplastic stretch wrap" is a limitation that excludes films that do not have suitable elastic properties for use as stretch wrap films.

(Id. at PageID 498-99.)

The Court therefore finds that the term "thermoplastic stretch wrap film" is limiting, as it "recites [a] limitation"

on the claim, distinguishing the '055 Patent from other films that do not have "suitable elastic properties for use as stretch wrap films." (See id.)

Because the preamble is limiting, the Court must construe the disputed language.

Multilayer proposes construing "thermoplastic stretch wrap film" to mean "thermoplastic film having cling and elastic properties such that when it is stretched around an object or objects, it will adhere to itself and attempt to relax, therefore applying a compressive force to the object or objects." (Pl.'s Br. at 13, ECF No. 53.)

Defendants propose construing "thermoplastic stretch wrap film" to mean "a film suitable for being stretched around, and applying a compressive force to, an object or objects wrapped thereby." (Defs.' Br. at 6, ECF No. 54.)

Multilayer argues that the claims of the '055 Patent "are limited to films having sufficient cling such that it will 'prevent relaxation back to its unstretched state so that the film will not unwrap and cause slippage of the stretched overlaid film layers.'" (Pl.'s Resp. at 5, ECF No. 57 (quoting '055 Patent col. 1:20-23, ECF No. 1-4).) Multilayer contends that cling properties are an essential part of the patent in order for it to "fulfill its claimed function." (Id. at 6.) Further, Multilayer notes that the elasticity property is also

essential to the patent and is set forth in the background of the invention. (Id. at 7.)

Defendants argue that the preferred construction should not include any reference to "cling and elastic properties that make it adhere to itself." (Defs.' Br. at 7, ECF No. 54 (internal quotation marks omitted).) Defendants cite the language of the patent that describes alternate methods of creating cling properties, such as "tack sealing, adhesive tape, spray adhesives, and the like" as indicating that the patent teaches stretch-wrap film that can be adhered to itself in ways other than through its inherent cling properties. (Id. (quoting '055 Patent col. 1:36-39, ECF No. 1-4).) Defendants also assert that including cling properties in a construction of the term would "render redundant the requirement in claim 1 that at least one outer layer has cling performance of at least 100 gram/inch." Further, Defendants argue that the proposed inclusion of elastic properties in the construction is "ambiguous" because the specification of the '055 Patent states "no description of a suitable level of elasticity, no identification of any specific elastic properties, nor any link of elasticity to the application of compressive force." (Defs.' Resp. at 12, ECF No. 58.)

Starting with the language of the claims themselves, both independent claims explicitly require that the film have a cling

property. Claims 1 and 28 explicitly state that "at least one of [the outer two layers has] a cling performance of at least 100 grams/inch." ('055 Patent col. 9:43-44, ECF No. 1-4; id. col. 12:47-48.) While the "Background of the Invention" section of the '055 Patent states that "at the completion of the wrapping, the stretch wrap film is cut and attached to the underlying layer by cling, tack sealing, adhesive tape, spray adhesives, and the like," the Court finds that this statement refers to prior art in the field of invention and discloses several methods by which stretch wrap may be adhered to itself, whereas the '055 Patent is limited to films that already have cling properties. This is evident from the fact that the title of the patent is "Multilayer Stretch Cling Film" and that the patent states that "in a preferred embodiment of the present invention, no cling additives are used in the films of the present invention" ('055 patent col. 3:29-50, ECF No. 1-4; id. col. 4:22-23). But see Phillips, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.").

The specification of the patent teaches that in order for the stretch-wrap film to have the ability to be "stretched and applied under tension around an object or objects being wrapped or bundled," so as to apply a compressive force, the wrap must

have a cling property to "prevent relaxation back to its unstretched state so the film will not unwrap and cause slippage of the stretched overlaid film layers." ('055 Patent col. 1:15-23, ECF No. 1-4.) The '055 Patent further states in its detailed description that "[f]or acceptable stretch film performance, it is expected that at least one outer layer has a cling characteristic allowing it to adhere to an adjacent wrapping of film when applied to a unitized load." (Id. col. 2:63-66.)

The Court also finds that the patent specification includes elasticity as a required property, as the patent states that the film is first stretched around the objects it seeks to bind, then relaxes and compresses on the objects. (Id. col. 1:14-23.) Therefore, the elasticity and the cling properties together "impart[] the compressive force." (See Pl.'s Resp. at 8, ECF No. 57 (citing '055 Patent col. 1:17-24, ECF No. 1-4).) The finding is supported by the prosecution history, specifically the BPAI Decision of March 30, 2006, which indicates that "films that do not have suitable elastic properties for use as stretch wrap films" were excluded from the scope of the patent. (ECF No. 53-8 at PageID 499.)

For these reasons, the Court adopts Multilayer's construction of the term "thermoplastic stretch wrap film" to mean "thermoplastic film having cling and elastic properties

such that when it is stretched around an object or objects, it will adhere to itself and attempt to relax, therefore applying a compressive force to the object or objects."

**2. "layer"  
(Claim 1 and Claim 28)**

Multilayer's proposed construction of the term is "an arrangement or combination of ingredients within the multilayer polymer structure lying over or under another." (Pl.'s Br. at 13, ECF No. 53.)

Defendants' proposed construction of the term is "a polymer composition within the multilayer polymer structure lying over or under another." (Defs.' Br. at 8, ECF No. 54.) The parties therefore agree on part of the construction of the term, namely, "within the multilayer polymer structure lying over or under another."

Multilayer agrees that the word "composition" is appropriate in the construction of this term, but disagrees with the term's scope. Multilayer argues that Defendants' use of the word "composition" in Defendants' proposed construction is ambiguous, and therefore the Court should construe it using its commonly understood meaning. (Pl.'s Br. at 13, ECF No. 53.)

Relying on the Webster's Dictionary website's definition, Multilayer states the commonly understood meaning of "composition" is "the particular arrangement or combination of

parts of a unit or whole." (*Id.*) Multilayer also argues that Defendants' proposed construction is too narrow as it improperly limits the term "layer" to only "polymer compositions." (Pl.'s Resp. at 9-10, ECF No. 57.) Multilayer asserts that the dependent claims of the '055 Patent teach that non-polymeric additives may be used in addition to polymer resins. (*Id.* at 10.) Multilayer contends this is supported by the '055 Patent's specification, which teaches that "layers may include additives, and the additives disclosed are not limited to polymers." (*Id.*)

Defendants argue that their construction is the preferred construction because it incorporates the word "polymer," which is used "to describe the specific resins within each 'layer'" throughout the '055 Patent. (Defs.' Br. at 8, ECF No. 54.) Defendants contend that "polymer composition" is the correct term as the words "arrangement" and "combination," as used in Multilayer's proposed construction, are "not found in the specification, are undefined in the intrinsic evidence cited by Multilayer, and are not shown to have an understood meaning to those in the art." (*Id.* at 9.) Additionally, Defendants clarified at the hearing that their proposed construction should not be read to limit the term "polymer composition" to "only . . . a polymer resin and nothing else." (Hr'g Tr. at PageID 2137:18-19.) Defendants also contest including the word "ingredients," as proposed in Multilayer's construction, because

it is overbroad in that it would not "require polymeric material in the layer." (Defs.' Br. at 9, ECF No. 54.) Defendants also argue that the Court should not adopt Multilayer's dictionary definition of "composition" as it is not supported by the context of the intrinsic evidence and Multilayer does not explain why it selected this particular definition among the many entries for "composition" in its chosen common-use dictionary. (Defs.' Resp. at 13-14 & n.5, ECF No. 58.)

When "the 'ordinary' meaning of a term does not resolve the parties' dispute, . . . claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit." O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1361 (Fed. Cir. 2008). The context of the '055 Patent's claims indicates that a person of ordinary skill in the art would understand the patent to require that each layer of the seven-layer thermoplastic stretch film include a polymer in its composition. Claims 1 and 28 explicitly teach "a multi-layer, thermoplastic stretch wrap film containing seven polymeric layers." ('055 Patent Claim 1, Claim 28, ECF No. 1-4 (emphasis added).) Dependent Claim 32 is explicit in that it teaches "the film of claim 1, wherein the compositional property is the presence of a resin additive." (Id. Claim 32.) Therefore, the '055 Patent teaches that each

layer of its multi-layer structure must contain a polymer, but these layers may also contain additives that are non-polymeric.

Turning to the patent's specification, the '055 Patent states, "The outer slip layer may include any of several anti-cling, slip or anti-block additives to improve the slip characteristics of the layer. Such additives include silicas, talcs, diatomaceous earth, silicates, lubricants, etc." (Id. col. 6:24-27.) Consistent with the independent and dependent claims, the specification indicates that the outer layers may contain additives, but it does not indicate that the outer layer may be composed of only additives. Therefore, one skilled in the art would understand the patent to teach that layers made from polymers or layers made from polymers combined with additives must be present in each of the seven layers.

Reviewing the specification and the claim language, the Court finds that the '055 Patent does not teach a thermoplastic stretch wrap film with non-polymeric layers. The '055 Patent allows for additives to the individual polymeric layers, therefore it allows for layers that are a composition containing a polymer. As a result, Defendants' use of the word "composition" does not make the claim ambiguous, and the Court therefore declines to adopt Multilayer's dictionary definition of "composition." Accordingly, the Court adopts the Defendants' construction of the term "layer" to mean "a polymer composition

within the multilayer polymer structure lying over or under another."

**3. "at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins"**  
(element (a) of Claim 1 and element (a) of Claim 28)

Multilayer's proposed construction of the above phrase is "made from linear low density polyethylene, very low density polyethylene, ultra low density polyethylene resin, or blends thereof, at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 g/inch as tested using ASTM [American Society for Testing and Materials ("ASTM")] D5458." (Pl.'s Br. at 21, ECF No. 53.)

Defendants' proposed construction of the phrase is "at least one outer layer must have 100 grams/inch cling performance and such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins." (Defs.' Br. at 11, ECF No. 54.)

As the term to be construed contains two distinct parts on which the parties disagree, the Court will first address "at least one of which having a cling performance of at least 100 grams/inch," and then address "said outer layer being selected from the group consisting of linear low density polyethylene,

very low density polyethylene, and ultra low density polyethylene resins."

**a. "at least one of which having a cling performance of at least 100 grams/inch"**

Multilayer's proposed construction of this part of the phrase is "at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 g/inch as tested using ASTM D5458." (Pl.'s Br. at 21, ECF No. 33.)

Defendants' proposed construction of this part of the phrase is "at least one outer layer must have 100 grams/inch cling performance." (Defs.' Br. at 11, ECF No. 54.)

Multilayer argues that including the ASTM testing specification in the proper construction is necessary because the '055 Patent's specification specifically calls for it: "The overall properties of the stretch wrap film of the present invention are such that they have a cling force at 0% elongation of about 100 grams to about 300 grams as measured according to ASTM D5458." (Pl.'s Br. at 19, ECF No. 53 (citing '055 Patent col. 6:33-37, ECF No. 1-4).)

Defendants state that including "a particular ASTM test that is not recited in the claim" is "not appropriate" (Defs.' Br. at 12, ECF No. 54), but do not make any explicit arguments to support this assertion in their briefing. At the hearing,

however, counsel for Defendant stated that including the ASTM test was inappropriate because it would improperly "incorporate things from the specification into the claim" and that "[t]here are plenty of people in the industry that use their own cling test to determine whether they're reaching 100 grams per inch or whatever their target is." (Hr'g Tr. at PageID 2146:20-2147:8.) Defendants acknowledged that the ASTM test is the "most commonly referenced standard." (*Id.* at PageID 2147:13-16.)

It is well-established that in claim construction, the patentee can define terms used within the patent. In Phillips, the Federal Circuit stated, "[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." Phillips, 415 F.3d at 1316; see also AIA Eng'g Ltd. v. Magotteaux Int'l S/A, 657 F.3d 1264, 1276 (Fed. Cir. 2011). Within element (a) of Claim 1 and element (a) of Claim 28, "cling performance of at least 100 grams/inch" is not further defined. Looking to the specification of the patent, it is evident that the term is defined by the patentee: "The overall properties of the stretch wrap film of the present invention are such that they have a cling force at 0% elongation of about 100 grams to about 300 grams as measured according to ASTM D5458." ('055 Patent col. 6:33-37, ECF No. 1-4.) The Court finds the

patentee has explicitly defined the method of measuring cling performance and therefore acted as his own lexicographer.

Therefore, the Court adopts Multilayer's proposed construction of the term "at least one of which having a cling performance of at least 100 grams/inch" in element (a) of Claim 1 and element (a) of Claim 28 to mean "at least one said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 g/inch as tested using ASTM D5458."

**b. "said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins"**

Multilayer's proposed construction of this part of the phrase is "made from linear low density polyethylene, very low density polyethylene, ultra low density polyethylene resin, or blends thereof."

Defendants' proposed construction of this part of the phrase is "such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins."

The parties agree that the language "said outer layer being selected from the group consisting of" is a Markush group. (See Pl.'s Br. at 20, ECF No. 53; Defs.' Br. at 12-13, ECF No. 54.) "A Markush group is a listing of specified alternatives of a

group in a patent claim, typically expressed in the form: a member selected from the group consisting of A, B, and C."

Abbott Labs. v. Baxter Pharm. Prods., Inc., 334 F.3d 1274, 1280 (Fed. Cir. 2003). Typically, when a Markush group is present in a claim, it is interpreted to be "closed," meaning "it must be characterized with the transition phrase 'consisting of,' rather than 'comprising' or 'including.'" Id. (internal quotation marks omitted). "Thus, members of the Markush group are used singly." Id. at 1281 (internal quotation marks omitted). The parties to the instant case disagree, however, on whether the Markush group is open or closed and, as a result, the effect of the Markush grouping on the scope of the claim language.

Multilayer argues that this Markush group is open for two reasons. First, Multilayer contends the dependent claims in the '055 Patent, specifically Claims 3, 24, and 32, add limitations to the independent claims, and therefore this "gives rise to a presumption that the limitation in question is not present in the independent claim." (Pl.'s Resp. at 28, ECF No. 57.) In other words, where "the limitation is not present in the independent claim; the independent claim needs to be broader." (Hr'g Tr. at PageID 2057:12-14.) Second, Multilayer asserts that the Federal Circuit "endorses a construction that gives claim terms their full meaning, that claim terms should not be

eviscerated." (*Id.* at PageID 2057:16-18; see also Pl.'s Resp. at 28-29, ECF No. 57.)

Multilayer asserts that dependent Claims 24 and 32 open the Markush group in element (a) of Claim 1 because Claim 24 explicitly allows blends of resins (see '055 Patent Claim 24, ECF No. 1-4 ("The multi-layer stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins.")) and Claim 32 explicitly allows resin additives (see Second Reexam. Cert., Claim 32, ECF No. 1-4 at PageID 26 ("The film of claim 1, wherein the compositional property is the presence of a resin additive.")). (Pl.'s Br. at 20-21, ECF No. 53.) As a result, Multilayer contends that the Markush group in element (a) of Claim 1 must allow for blends of resins or the presence of resin additives, as these are limitations recited in the dependent claims, and an independent claim should be interpreted broader than its dependent claims. Additionally, Claim 3 specifically excludes cling additives, giving rise to Multilayer's argument that element (a) of Claim 1 must be broader in scope, and therefore allows the inclusion of cling additives. (Pl.'s Resp. at 28, ECF No. 57.) Multilayer argues that if the Markush group were closed, then dependent Claims 24 and 32 "would be rendered meaningless," contrary to Federal Circuit precedent, as the outer layers of the stretch-wrap film could not contain blends of resins or resin additives. (*Id.* at

21 (citing Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., 520 F.3d 1358, 1362 (Fed. Cir. 2008) ("[T]his court strives to reach a claim construction that does not render claim language in dependent claims meaningless."))..)

As a result, when read within the context of all the claims of the patent, Multilayer argues that the Markush group in element (a) of Claim 1 is open to include blends of resins, resin additives, and cling additives. (Pl.'s Resp. at 28, ECF No. 57.)

Defendants argue that the Markush group is closed. (Defs.' Br. at 13, ECF No. 54.) Defendants agree that a Markush group can be open, but disagree that this can be achieved through a dependent claim. (Id.; see also Hr'g Tr. at PageID 2141:20-2142:4.) Instead, Defendants argue that "[i]f a patentee desires mixtures or combinations of the members of the Markush group, the patentee would need to add qualifying language while drafting the claim." (Defs.' Br. at 13, ECF No. 54 (quoting Abbott Labs., 334 F.3d at 1281 (internal quotation marks omitted))). Defendants contend that Multilayer did not add qualifying language to element (a) of Claim 1, rather it attempted to broaden the scope of the independent claim in dependent Claims 3, 24, and 32. Defendants argue that because element (a) of Claim 1 uses the language "being selected from the group consisting of [LLDPE, VLDPE, and ULDPE] resins," the

outer layer composition is therefore restricted to those named resins and "cannot contain blends of the listed classes of resins." (Id.) Further, Defendants argue that broadening the scope of element (a) of Claim 1's Markush group would violate 35 U.S.C. § 112(d), which states, "[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." 35 U.S.C. § 112(d). Accordingly, Defendants argue that dependent Claims 3, 24, and 32 cannot broaden element (a) of Claim 1 and element (a) of Claim 28, they can only "further" limit their scope. (Defs.' Resp. at 19, ECF No. 58.) As element (a) of Claim 1 and element (a) of Claim 28 do not contemplate blends of resins or additives, those variations in the dependent claims should be considered "further limitations," and Defendants argue that Multilayer's construction would allow the dependent claims in question to present additions, not further limitations, to the independent claims.

Considering the language of the claims themselves, the Court finds the Markush group, as stated in element (a) of Claim 1 and element (a) of Claim 28, is closed. Consistent with Federal Circuit precedent, the Court agrees that, if a patentee wishes to include "mixtures or combinations of the members of

the Markush group," the qualifying language must be present in the claim itself. Abbott Labs., 334 F.3d at 1281; see id. ("Thus, without expressly indicating the selection of multiple members of a Markush grouping, a patentee does not claim anything other than the plain reading of the closed claim language."). The Court finds no authority to the contrary to allow a dependent claim to open a closed Markush group contained within an independent claim. See N. Am. Vaccine v. Am. Cyanamid Co., 7 F.3d 1571, 1577 (Fed. Cir. 1993) ("While it is true that dependent claims can aid in interpreting the scope of claims from which they depend, they are only an aid to interpretation and are not conclusive."); accord Regents of Univ. of Cal. v. Dakocytomation Cal., Inc., 517 F.3d 1364, 1375 (Fed. Cir. 2008).

The Court recognizes, however, that the '055 Patent specifically references blends of resins in its Abstract ('055 Patent Abstract, ECF No. 1-4 at PageID 12 ("The resins also may be blended to achieve a desired range of physical or mechanical properties of the final film product.")), the Summary of the Invention (id. col. 1:65-67 ("Also, at least two of the resins may be blended to achieve a desired range of physical or mechanical properties of the final film product.")), and certain preferred embodiments (e.g., id. col. 7:24-25 ("wherein [outer layer] A represents: . . . a C2/C6 LLDPE copolymer blended with a C2/C3 copolymer")). Nevertheless, the Federal Circuit has

stated, "the claim requirement presupposes that a patent applicant defines his invention in the claims, not in the specification." Johnson & Johnston, 285 F.3d at 1052. "[T]he claims, not the specification, provide the measure of the patentee's right to exclude." Id.; accord SanDisk Corp. v. Kingston Tech. Co., Inc., 695 F.3d 1348, 1363 (Fed. Cir. 2012) ("'[W]hen a patent drafter discloses but declines to claim subject matter, . . . this action dedicates that unclaimed subject matter to the public.''" (alterations in original) (quoting Johnson & Johnston, 285 F.3d at 1054)). As related to Markush groups specifically, "[i]f a patentee desires mixtures or combinations of the members of the Markush group, the patentee would need to add qualifying language while drafting the claim." Abbott Labs., 334 F.3d at 1281 (emphasis added).

Furthermore, the Court recognizes that one skilled in the art likely understands blends of polymers to be common in the art. The Miro and Simmons patents, prior-art patents that were overcome in the prosecution of the '055 Patent, each contain specific references to blends. The Eichbauer patent, also a prior-art patent overcome during prosecution, impliedly references blends. Despite this, "that does not mean that the inventor's choice of words may be ignored." Int'l Rectifier Corp. v. IXYS Corp., 361 F.3d 1363, 1371 (Fed. Cir. 2004).

While one skilled in the art may recognize blends of polymers

and the advantages therein, there is nothing in the language of the claim itself to indicate blends of the specifically listed polymers. See id. at 1372 (finding that the patentee "could have claimed . . . more broadly but chose [his term] without modification or qualification," therefore the district court "was not free to attribute new meaning to the term or to excuse the patentee from the consequences of its own word choice"). Element (a) of Claim 1 and element (a) of Claim 28 do not contain any qualifying language to indicate that blends of resins are within the scope of the independent claims.

Finding the Markush group closed does not render dependent Claims 3, 24, and 32 meaningless. To the contrary, the language of element (a) of Claim 1 addresses the two outer layers of a stretch cling film and notes that "at least one" of the layers will have the requisite cling performance. The closed Markush group, which dictates from which resins "said outer layer" will be made, applies to at least one "outer layer," not necessarily to both outer layers. (See Certificate of Correction, ECF No. 1-4 at PageID 21 ("A multi-layer, thermoplastic stretch wrap film containing seven separately identifiable polymeric layers, comprising . . . two identifiable outer layers . . . .")) As a result, one outer layer will be subject to the Markush group, while the other may contain a blend of the resins, as recited in Claim 24.

Regarding Claim 32, the Court finds that this dependent claim does not improperly broaden the scope of element (a) of Claim 1 as Defendants suggest. The Markush group in element (a) of Claim 1 concerns only the available resins from which the layer may be constructed; it does not concern the presence of resin additives. Consistent with 35 U.S.C. § 112, dependent Claim 32 "contain[s] a reference to a claim previously set forth and then specif[ies] a further limitation of the subject matter claimed." Claim 1 does not contemplate resin additives, therefore the presence of resin additives in the stretch-wrap film of Claim 32 is a further limitation. See also Phillips 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim."). It is well-established that "[c]laims mean precisely what they say." Cent. Admixture Pharmacy Servs., Inc. v. Advanced Cardiac Solutions, P.C., 482 F.3d 1347, 1355 (Fed. Cir. 2007). The patentee could have added the limitations of resins additives within the scope of Claim 1, but chose not to. Furthermore, there is no danger of the scope of the term "resin additives" being overbroad, as the Court construes the term in the instant Order. See infra Pt.IV.C.11.

Claim 3, which contemplates no cling additives in the stretch wrap film, survives as well. A cling additive could be

added to one of the two outer layers of Claim 1, differentiating that composition from the composition contemplated by Claim 3.

Therefore, the Court adopts Defendants' proposed construction of the phrase "said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins" in element (a) of Claim 1 and element (a) of Claim 28 to mean "such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins."

In summary, the Court construes the phrase "at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins" to mean "at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 grams/inch as tested using ASTM D5458 and such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins."

4. “containing seven separately identifiable polymeric layers, comprising”  
(`055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)

Multilayer’s proposed construction of the phrase is “including at least seven physically distinguishable polymeric layers, comprising.” (Pl.’s Br. at 15, ECF No. 53.)

Defendants’ proposed construction of the phrase is “including at least seven polymeric layers that are structurally distinct and compositionally the same or structurally distinct and compositionally different when compared to an adjacent layer.” (Defs.’ Br. at 9-11, ECF No. 54.)

Multilayer argues that its proposed construction “is consistent with the accepted meaning of the term ‘containing’ and the commonly understood meaning of the term ‘separately identifiable’ used by the BPAI in the first reexamination.” (Pl.’s Br. at 15, ECF No. 53.) Regarding “containing,” Multilayer asserts that it is understood in patent parlance that “containing” is an open-ended term that indicates the ‘055 Patent “must have at least seven layers, but may have more.” (*Id.* at 14 (citing Mars, Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1376 (Fed. Cir. 2004) (“[L]ike the term ‘comprising,’ the term[] ‘containing’ . . . [is] open-ended.”))). Regarding “separately identifiable,” Multilayer asserts that the prosecution history

supports its construction as the BPAI, in reversing the Examiner's initial rejection of the claims in the first reexamination of the '055 Patent, "found that the term 'layer' necessarily requires that . . . each layer be 'identifiable,' that is, able to be physically distinguished from other layers[.]" (*Id.* at 14 (citing ECF No. 53-8 at 13).)

Defendants argue that its proposed definition is the same definition proposed by the patentee during the patent's prosecution. (Defs.' Br. at 9-10, ECF No. 54.) Defendants note that the patentee explained in his April 8, 2005, appeal brief that the "claimed stretch wrap film may be . . . a film having seven structurally identifiable layers which are not compositionally different[, . . .] and . . . a film having seven structurally distinct layers which are also compositionally different." (*Id.* at 10 (quoting ECF No. 55-8 at PageID 1265).)

Defendants agree that the term "containing" is open-ended, indicating "at least seven polymeric layers." (*Id.*) Defendants further contend that Multilayer's proposed construction is not only based on a non-binding opinion of the BPAI, but also was rejected by the examiner in a subsequent reexamination. (*Id.* at 10-11 & n.6 (citing ECF No. 55-11 at PageID 1554-55, 1560).)

Reviewing the prosecution history, the Court agrees with Multilayer that the BPAI determined the layers must be "physically identifiable." The Court also finds that, in the

appeal brief cited by Defendants, the patentee attempted to distinguish his patent from the Miro Patent by specifically noting that the '055 Patent's inner layers do not bond with one another, thereby creating a seven-layer stretch-wrap film. (See ECF No. 55-8 at PageID 1265.) The context of the patentee's argument - on which Defendants base their proposed construction - regarded structural differences between the Miro Patent and the '055 Patent before and after extrusion; the patentee did not make this statement with regard to the claim amendment "separately identifiable." As a result, the Court finds Defendants' argument is inapposite to the instant term's construction. Regarding Defendants' assertion that the earlier decision of the BPAI was "rejected by the examiner in the second reexamination," review of the prosecution history indicates that the "rejection" was based on evidence that related to the Miro Patent having "seven structurally identifiable layers," not the BPAI's determination that the layers must be "physically distinguishable." (See ECF No. 55-1 at PageID 1554-55.)

Reviewing the specification and the claims themselves, the Court finds that Multilayer's proposed construction partially comports with the intrinsic evidence of the '055 Patent. Describing a seven-layer stretch film wrap "represented by . . . A/B/C/D/E/F/G," the Detailed Description of the Invention states,

[T]he A and G layers may be the same or different polymer resins, at least one of which is used for cling performance and the A, B, C, D, E, F and G layers or any combinations of said layers may be the same or different polymer resins selected for specific film end-use properties.

('055 Patent col. 2:39-44, ECF No. 1-4.) The specification further states, "It is preferred that the inner five layers are different one to the other in that at least two different polymer resins are used in any combination to make up the five layers." (Id. col. 4:29-32.) Amended Claims 1 and 28 explicitly require the layers in the claimed invention to "have different compositional properties when compared to a neighboring layer." (Second Reexam. Cert. col. 2:2-3, 25-27, ECF No. 1-4 at PageID 26.) As dependent Claims 29-35 contemplate differences in "compositional properties" that result from adding substances other than polymer resins (see, e.g., Claim 32, Second Reexam. Cert., ECF No. 1-4 at PageID 26 ("The film of claim 1, wherein the compositional property is the presence of a resin additive.")), the Court finds that the term "composition," as used in the '055 Patent, is not limited to the polymer resins selected for each layer. Defendants' construction, which allows the layers to be "compositionally the same" so long as they are "structurally distinct," is thus not supported by the actual language of the claims at issue. Accordingly, the Court adopts in part Multilayer's construction,

and construes the term "containing seven separately identifiable polymeric layers, comprising," to mean "including at least seven physically distinguishable polymeric layers that are distinct on a compositional level from adjacent polymeric layers, comprising."

5. **"five identifiable inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins"**  
(element (b) of Claim 1 and element (b) of Claim 28) ('055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)

Multilayer's proposed construction of the term is "made from linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, metallocene-catalyzed linear low density polyethylene resin, or blends thereof." (Pl.'s Br. at 22, ECF No. 53.)

Defendants' proposed construction of the term is "each of five identifiable inner layers must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, ultra low density polyethylene resins, or metallocene-catalyzed linear low density polyethylene resins." (Defs.' Br. at 14, ECF No. 54.)

As stated above, the parties agree that the terms in element (b) of Claim 1 and element (b) of Claim 28 are styled as a Markush group. For the same reasons stated supra Part IV.C.3.b., the Court finds the Markush group is closed. Additionally, the parties agree that the introductory transition phrase at the end of Claim 1, "comprising," indicates a stretch-wrap film that has at least seven layers, but which could have more. (See Defs.' Resp. at 14, ECF No. 58; Pl.'s Br. at 14, ECF No. 53.) Though the Markush group is closed, the dependent Claims 3, 24, and 32 are not rendered meaningless. Dependent Claims 3 and 32 survive for the same reasons the Court stated supra Part IV.C.3.b. Blends of resins could be present in additional inner layers beyond the seven-layer structure described in Claims 1 and 28. (See '055 Patent col. 1:55-57, ECF No. 1-4 ("The film comprises . . . at least five internal layers . . . ."))

As a result, the Court adopts Defendants' construction of the term and construes the term to mean "each of five identifiable inner layers must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, ultra low density polyethylene resins, or metallocene-catalyzed linear low density polyethylene resins."

**6. "linear low density polyethylene"  
(Claim 1 and Claim 28)**

Multilayer's proposed construction of the term is "a class of polymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching." (Pl.'s Br. at 17, ECF No. 53.)

Defendants' proposed construction of the term is "a class of copolymers of ethylene and alpha-olefins made using a type of Ziegler-Natta catalyst, which are characterized by relatively straight polymer chains with short chain branching and little or no long chain branching of the type found in LDPE, and having a density of between about .915 and .940 g/cc." (Defs.' Br. at 22, ECF No. 54.)

Multilayer argues that the language of the claims, the specification, and the prosecution history do not "reveal any special meaning for the term[] 'linear low density polyethylene.'" (Pl.'s Br. at 17, ECF No. 53.) Multilayer proposes that one skilled in the art would, therefore, give the term its "commonly understood meaning." (Id.) Multilayer argues the claims of the '055 Patent do not distinguish the resins based on the type of catalysts used in their production, thus Defendant's proposed construction is too restrictive of what is actually claimed in the patent. Regarding the catalyst used to create LLDPE, Multilayer asserts that the term "LLDPE"

is a blanket-term for a number of different polyethylenes, therefore limiting the construction to one which includes only one type of catalyst would be improper. (Pl.'s Resp. at 21, ECF No. 57.) Multilayer contends the specification of the '055 Patent contemplates the differences in catalysts by using "the term 'conventional linear low density polyethylene' when distinguishing between Ziegler-Natta catalyzed and metallocene-catalyzed linear low density polyethylene." (Id. at 21 (citing '055 Patent col. 4:33-37, ECF No. 1-4).) Multilayer argued at the hearing that "metallocene catalyzed [LLDPE] is a type of linear low density polyethylene," supporting its position that the type of catalyst used further distinguished types of LLDPE within the broader term "LLDPE." (Hr'g Tr. at PageID 2078:2-3.)

Defendants argue that as LLDPE is a "common material well-known to persons of ordinary skill in the art," it is not defined within the specification or claims of the '055 patent, and therefore extrinsic evidence can be used to determine its meaning. (Defs.' Br. at 22-23, ECF No. 54.) Defendants cite The Film Extrusion Manual as the authoritative extrinsic source for defining LLDPE (see Film Extrusion Comm., The Film Extrusion Manual: Process, Materials, Properties (Vargas, et al. eds., 1992) [hereinafter The Film Extrusion Manual], ECF No. 55-2 at PageID 776-87), and the report of defense expert Dr. George Eichbauer as confirming that source as authoritative (see Expert

Claim Construction Report of George Eichbauer at 3, 22 n.10 (Oct. 25, 2012), ECF No. 55-3). Defendants' proposed construction focuses on narrowing the term by the description of its branching properties, its polymeric components, the type of catalysts used in its production, and its density range. Defendants contend these extrinsic sources state that LLDPE is "a chemical substance that is a class of copolymers of ethylene and alpha-olefins . . . made using a Ziegler-Natta catalyst." (Defs.' Br. at 23, ECF No. 54 (citing The Film Extrusion Manual 471, ECF No. 55-2 at PageID 776; ECF No. 55-3 at 22).) Defendants also seek to distinguish LLDPE from the additional resins VLDPE and ULDPE stated in the claim by including a density range of "about 0.915-0.940 g/cc" in its proposed construction. (Id. at 24.) Defendants argue that density is the "primary way to distinguish linear low density polyethylene [LLDPE] from very low density polyethylene [VLDPE] and ultra low density polyethylene [ULDPE]." (Id.)

As an initial matter, the Court finds that use of extrinsic evidence is proper in construing this term where the disputed terms are not defined within the specification or claims of the patent. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317 (quoting Markman, 52 F.3d at 980)

(internal quotation marks omitted). In Phillips, the Federal Circuit stated,

[E]xtrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as . . . to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.

Id. at 1318.

**a. Branching Architecture and Polymeric Characteristics**

The parties' proposed constructions agree that LLDPE exhibits "relatively straight polymer chains with short chain branching." The parties disagree as to whether the proper construction of the term must also distinguish LLDPE from LDPE.

Review of the extrinsic sources provided by Multilayer relating to LLDPE reveals that the treatise cited by its expert, Dr. Maureen Reitman, describing the architecture of the polyethylene is incomplete in that it only discusses three "major types of polyethylene, generally described as high density polyethylene (HPDE), low density polyethylene (LDPE), and linear low density polyethylene (LLDPE)," and was published in 2006. (ECF No. 53-20 at PageID 681 (citing Peacock, A. & Calhoun, A., Polymer Chemistry: Properties and Applications 268 (2006))). The claims of the '055 Patent at issue here, however, include the terms "very low density polyethylene" and "ultra low

density polyethylene." Additionally, "the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Phillips, 415 F.3d at 1313. The '055 Patent was filed in 2001, therefore the treatise on which Dr. Reitman based her report is not as helpful to the Court as a treatise published before the time of the '055 Patent's filing.

Dr. Reitman's definition for LLDPE, however, states that LLDPE is "composed of chain backbones with many small side branches, but no long side chains" (ECF No. 53-20 at PageID 681), and is thus consistent with extrinsic sources published before the time of the '055 Patent's filing. (See The Film Extrusion Manual 471, ECF No. 55-2 at PageID 776 ("Most LLDPE polymers are characterized by short-chain branching induced by the comonomer type, with little or no long-chain branching . . . ."); Chanda & Roy, Plastics Technology Handbook 1016 (3d ed. 1998), ECF No. 59-6 at PageID 2773 ("LLDPE has significantly different processing characteristics than LDPE due to the absence of long-chain branching . . . ."); Whittington's Dictionary of Plastics 282 (James F. Carley ed., 1998) [hereinafter Dictionary of Plastics], ECF No. 59-7 at PageID 2778 ("LLDPE . . . has a highly branched structure.").) Taken

together, these extrinsic sources support the conclusion that "[t]he absence of long-chain branching is the key molecular distinction between LLDPE and LDPE." (The Film Extrusion Manual 471, ECF No. 55-2 at PageID 776.)

Additionally, Dr. Reitman testified that "short chain branching is what characterizes these materials, and to the extent that there's a limited number of long chain branching, it is distinguishable from the characteristics of traditional low density polyethylene which has a different sort of architecture." (Hr'g Tr. at PageID 2094:6-11.) She also agreed with Defendants that it is "generally accepted" that LLDPE consists of copolymers. (Id. at PageID 2094:17-2095:1.)

Defendants' expert did not testify regarding the branching structure of LLDPE, but the extrinsic evidence that Defendants submitted with their memoranda supports the construction that LLDPE has short-chain branching with little or no long-chain branching. Additionally, Defendants argue that, in general, "polyethylene" should not be defined as a class of polymers, but rather as a homopolymer (a polymer made entirely of one type of monomer, i.e., ethylene) or copolymer (a polymer made entirely of two types of monomers). (Defs.' Resp. at 27, ECF No. 58 (citing Hans-Georg Elias, An Introduction to Plastics 241-42 (1993), ECF No. 59-4 at PageID 2464-65); see also The Film Extrusion Manual 752, ECF No. 55-2 at PageID 790).) "If the

polyethylene is not a copolymer, then it is more correctly called a homopolymer." (Defs.' Resp. at 27, ECF No. 58.) Defendants contend this distinction is necessary to distinguish LDPE from LLDPE and metallocene-catalyzed LLDPE ("m-LLDPE") as used in the '055 Patent. (*Id.*)

The Court agrees that a distinction between LLDPE and LDPE is necessary in the proper construction of the term "linear low density polyethylene." The patent itself uses the terms LLDPE and LDPE separately, therefore the Court must adopt a construction that appropriately distinguishes the two resins. The extrinsic sources support the conclusion that the branching architectures of the polyethylenes differ and thus the proper construction will identify those differences. As a result, the Court adopts in part Defendants' construction of the term "linear low density polyethylene" to include "relatively straight polymer chains with short chain branching and little or no long chain branching."

The Court also finds that Defendants' proposed construction which defines LLDPE more specifically as "a class of copolymers of ethylene and alpha-olephins" is the preferred construction because it more appropriately reflects the difference between polyethylenes that are homopolymers and polyethylenes that are copolymers as stated in the extrinsic sources and understood by one of ordinary skill in the art. As understood in the art,

LLDPE is a copolymer and thereby distinguished from LDPE, which is a homopolymer. (See Defs.' Br. at 23, ECF No. 54 (citing The Film Extrusion Manual 453-55, 471-72, ECF No. 55-2 at PageID 773-77); Defs.' Resp. at 27, ECF No. 58; compare The Film Extrusion Manual 453, ECF No. 55-2 at PageID 773 ("In [LDPE's] polymerization process, ethylene monomer combines at high pressures and temperatures to form long polymer chains with many branches."), with id. 471, ECF No. 55-2 at PageID 776 ("[LLDPE] resins are manufactured by copolymerizing ethylene with selected alpha-olefin comonomers normally at lower pressures and temperatures than conventional LDPE.").)

**b. Catalysts**

The parties also disagree on whether the proper construction includes the type of catalyst used to produce LLDPE. Defendants maintain that "linear low density polyethylene," as used in the '055 Patent, must be produced using a Zeigler-Natta catalyst. Review of the specification and the prosecution history of the '055 Patent indicates that there is no reference to a specific type of catalyst used to produce LLDPE. As there is no reference to the catalyst used in the polymerization of LLDPE, the Court turns to the extrinsic sources provided by the parties to determine whether the proper construction of the term includes the type of catalyst. Review of the extrinsic sources indicates that only defense expert Dr.

Eichbauer stated that LLDPE is distinguished from other polyethylenes by including a reference to a Zeigler-Natta catalyst. (Compare The Film Extrusion Manual 471-73, ECF No. 55-2 at PageID 776-78 (discussing characteristics of LLDPE and LDPE polymers), with Eichbauer Decl. at 23, ECF No. 55-3 (asserting the use of the Zeigler-Natta catalyst).)

Reviewing the extrinsic sources on which Dr. Eichbauer relied, The Film Extrusion Manual's chapter on LLDPE makes no mention of the catalyst involved in producing the polyethylene. (The Film Extrusion Manual 471-82, 486, ECF No. 55-2 at PageID 776-88.) The treatise Understanding Plastics Packaging Technology refers to the Zeigler-Natta catalyst in conjunction with LLDPE, but only to note that using a Ziegler-Natta catalyst "produce[s] LLDPE with a relatively broad molecular weight distribution." (Susan E.M. Selke, Understanding Plastics Packaging Technology 21 § 2.2.3 (1997), ECF No. 55-3 at PageID 830.) The treatise does not claim that LLDPE can be produced only by using a Ziegler-Natta catalyst. (Id.; see also Dictionary of Plastics 282, ECF No. 59-7 at PageID 2778 (noting that use of a Ziegler-Natta catalyst can produce LLDPE with a specific density range); Harry Marvidis, Effect of Metallocene Blending on Critical Film Properties of LLDPE Stretch Films (1999), ECF No. 59-8 (concerning the blending of metallocene-catalyzed LLDPEs into Ziegler-Natta catalyzed LLDPEs).)

Plaintiff's expert Dr. Reitman testified at the hearing that one skilled in the art would "not limit the term linear low density polyethylene to only linear low density polyethylene made with Ziegler-Natta catalysts." (Hr'g Tr. at PageID 2111:18-21.) Discussing the types of coordination catalysts used, Dr. Reitman stated, "The categories that we typically talk about are the Ziegler-Natta category, the metallocene category and then sort of the Phillips or the metal oxide category." (*Id.* at PageID 2089:1-3.) Dr. Reitman stated that "different manufacturers will use different catalysts to make different grades" of LLDPE, but that "they're called linear low density polymers really regardless of the catalysts." (*Id.* at PageID 2090:10-15.) In her opinion, the term "linear low density polyethylene covers both Ziegler-Natta and metallocene catalyzed linear low density polyethylene." (*Id.* at PageID 2019:2-5.)

Defendants' expert Dr. Eichbauer contradicted this testimony regarding LLDPE catalysts, however, and stated that "conventional" LLDPE as claimed in the patent (see '055 Patent col. 3:55-56, col. 4: 33-34, ECF No. 1-4), would refer to LLDPE made with a Ziegler-Natta catalyst. (Hr'g Tr. at PageID 2160:11-21.) Dr. Eichbauer testified that the LLDPE that is referenced throughout the '055 Patent is the "conventional" LLDPE and is therefore distinguished from metallocene-catalyzed LLDPE by use of the Ziegler-Natta catalyst. (*Id.* at PageID

2160:1-7.) Dr. Eichbauer testified that, at the time of the '055 Patent's application, catalysts other than the Ziegler-Natta type were not used because the Ziegler-Natta catalyst was "the dominant technology of the primary sources of material that were available, and they also exhibited the properties that were necessary for the product, highest stretchability, the excellent tear resistance and those types of properties." (Id. at PageID 2161:8-12.)

As noted at the hearing, the Court finds that "conventional linear low density polyethylene" and "linear low density polyethylene" are not used interchangeably throughout the patent via the term "LLDPE" (see Hr'g Tr. at PageID 2189:21-2191:25), therefore, limiting the construction for the term "linear low density polyethylene" to the "conventional" Ziegler-Natta catalyst is improper. In contrast, the term "m-LLDPE" (metallocene-catalyzed LLDPE) specifically includes the type of catalyst used to produce the resin. Therefore, LLDPE, as the extrinsic evidence shows, is a broader term and includes polyethylenes that can be produced using various catalysts.

Having reviewed the experts' testimony and the available extrinsic sources provided by the parties, the Court finds that while "conventional LLDPE" may refer only to LLDPE produced by a Ziegler-Natta catalyst, there is no indication that LLDPE

generally, and as used in the disputed claims, must be produced using a Ziegler-Natta catalyst.

### c. Density

As an initial matter, the parties agree that the polyethylene resins stated in Claims 1 and 28 are styled as a Markush group. See Abbott Labs., 334 F.3d at 1280; supra Pt. IV.C.3.b. In both elements (a) and (b) of Claims 1 and 28 of the '055 Patent, the resins used for the inner or outer layers of the stretch-cling film are listed following the language "layer being selected from the group consisting of." (See '055 Patent Claim 1 and Claim 28, ECF No. 1-4.) Markush groups are typically closed, thus "the members of the Markush group are used singly." Abbott Labs., 334 F.3d at 1281 (internal quotation marks omitted).

Because the terms are presented as a Markush group, Defendants contend that the polyethylene resins must be distinct alternatives. (Defs.' Br. at 22, 24, ECF No. 54.) Defendants contend that failing to distinguish the terms by density would result in LLDPE "improperly read[ing]" on VLDPE and ULDPE. (Id. at 24.) Defendants argue that VLDPE and ULDPE are both "copolymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching," therefore Multilayer's proposed construction of LLDPE is too broad and would render VLDPE and ULDPE superfluous language

within the claim. (*Id.*) Defendants contend that including density ranges for the disputed terms is "essential to defining LLDPE in a manner that distinguishes it from VLDPE and ULDPE." (*Id.*)

Multilayer contends "[t]here is nothing in the claims, specification, or prosecution history that reveal any special meaning for the term[] 'linear low density polyethylene,'" thus Multilayer did not include a density range in its proposed construction. (Pl.'s Br. at 17, ECF No. 53.) Additionally, Multilayer argues that there is no requirement that the terms within a Markush group be distinct, therefore the term "LLDPE" can encompass the resins m-LLDPE, or VLDPE and ULDPE, and not render the terms superfluous. (Pl.'s Resp. at 20-21, ECF No. 57.)

The Court agrees with Multilayer. In its Manual of Patent Examining Procedure, the USPTO states, "A Markush claim may encompass a large number of alternative species, but is not necessarily indefinite under 35 U.S.C. [§] 112, second paragraph for such breadth." Manual of Patent Examining Procedure § 2173.05(h) (8th ed., rev. 2012).<sup>5</sup> Further,

the double inclusion of an element by members of a Markush group is not, in itself, sufficient basis for objection to or rejection of claims. Rather, the facts in each case must be evaluated to determine

---

<sup>5</sup> An electronic copy of the Manual of Patent Examining Procedure is available at <http://www.uspto.gov/web/offices/pac/mpep>.

whether or not the multiple inclusion of one or more elements in a claim renders that claim indefinite.

Id.

Regarding the inclusion of specific density ranges in order to distinguish the resins from one another in the claim, Defendants rely on the extrinsic source, An Introduction to Plastics, which states, "The extent of branching determines crystallinity, which in turn effects [sic] density and other properties. Poly(ethylene)s are thus classified according to their density." (Hans-Georg Elias, An Introduction to Plastics 241 (1993), ECF No. 59-4 at PageID 2764 (citation omitted).) A statement of density ranges for the named resins is found in this same source. There, VLDPE is defined as having a density of less than 0.910 g/cc; LDPE is defined as having a density range of between 0.910 and 0.925 g/cc; and LLDPE is defined as having a density range of between 0.925 and 0.940 g/cc. (Id. at 242 tbl.12-2, ECF No. 59-4 at PageID 2765.)

Multilayer's expert, Dr. Reitman, agreed that LLDPE, VLDPE, and ULDPE can be distinguished by their relative densities. (Hr'g Tr. at PageID 2095:19-2096:4.) Dr. Reitman stated, however, that "the linear low will give us a range - approximate range of densities, and then when you start talking about very low, ultra low, that's below that, I don't know there's a specific transition point." (Id. at PageID 2096:10-13.)

Additionally, Multilayer contends that no density range should be included with the construction of LLDPE because Defendants' own expert, Dr. Eichbauer, has contradicted his contention that "it is 'well[-]known' that LLDPE has a density range of 0.915-0.940 g/cc" in one of his own patents. (Pl.'s Resp. at 22, ECF No. 57 (citing Defs.' Br. at 24, ECF No. 54).) In the '202 Patent, for example, the detailed description states,

The LLDPE resins that can be used in the outside cling layers herein have a density ranging from about 0.890 to about .940 g/cm<sup>3</sup>, more commonly from about 0.90 to about 0.93 g/cm<sup>3</sup> . . . . Particularly preferred are those LLDPE resins possessing densities within the range from about 0.917 to 0.920 g/cm<sup>3</sup> . . . .

('202 Patent col. 4:21-27, ECF No. 57-7 at PageID 2553.)

Multilayer also notes that the same patent states that the density ranges of LLDPE and VLDPE overlap. (Pl.'s Resp. at 22-23, ECF No. 57 (citing '202 Patent col. 4:36-38, ECF No. 57-7 at PageID 2553).) Finally, Multilayer argues that Dr. Eichbauer previously stated in a different patent application that VLDPE and ULDPE were "interchangeable." (Id. at 23 (citing U.S. Pat. App. No. 12/623,344 at 6 ¶ 0064, ECF No. 57-8).)

While the extrinsic evidence indicates there may be specific density ranges for the polyethylene resins contemplated for use in Claims 1 and 28, the intrinsic evidence of the patent's specification, certain dependent claims, and patents incorporated by reference in the '055 Patent contradicts this

extrinsic evidence. "While extrinsic evidence can shed useful light on the relevant art," the Federal Circuit has "explained that it is less significant than the intrinsic record in determining the legally operative meaning of claim language." Phillips, 415 F.3d at 1317 (quoting C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004)) (internal quotation marks omitted).

With respect to the claim language itself, the density levels of the resins are stated as follows. Resin density for the outer layers as stated in the specification of the '055 Patent for all the "[s]uitable polyethylene resins for cling use" - selected from conventional LLDPE, VLDPE, and ULDPE - is "between 0.860 and 0.940 g/cc density, preferably between 0.875 and 0.925 g/cc, and more preferably between 0.890 and 0.920 g/cc." ('055 Patent col. 3:55-4:5, ECF No. 1-4.) Resin density for the inner layers as stated in the specification of the '055 Patent for all the "[s]uitable polyethylene resins for strength" - selected from conventional LLDPE, VLDPE, ULDPE, and metallocene-catalyzed LLDPE - is "between 0.860 and 0.940 g/cc density, preferably between 0.875 and 0.925 g/cc, and more preferably between 0.890 and 0.920 g/cc." (Id. col. 4:33-36, col. 4:49-52.)

Therefore, the resin densities as stated in the specification of the '055 Patent are not helpful to the Court in

distinguishing one resin from another as the stated ranges are for all the resins listed, not individual resins. There are, however, specific densities for specific resins stated in dependent Claims 18, 19, and 20. (See id., Claim 18 ("[VLDPE] with . . . a resin density of 0.910 g/cc"; "[LLDPE] with . . . a resin density of 0.917 g/cc"); id., Claim 20, ("[LLDPE] with . . . a resin density of 0.910 g/cc").) In those claims, the patentee expressed a density that was preferable for the selected resins. "[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Phillips, 415 F.3d at 1315. As a result, no density range is needed in the Court's construction of the term "linear low density polyethylene" of Claims 1 and 28.

Additionally, the intrinsic evidence of patents incorporated by reference in the '055 Patent reveal density ranges for LLDPE broader than what Defendants propose. U.S. Patent No. 5,922,441 (the "'441 Patent"), obtained by Defendants' expert Dr. Eichbauer, states, "The LLDPE resins that can be used in the first and second layers herein have a density ranging from about 0.890 to 0.940 g/cm<sup>3</sup>, more commonly from about 0.90 to about 0.93 g/cm<sup>3</sup>." ('441 Patent col. 6:29-32, ECF No. 55-23 at PageID 2423.) The same patent notes that "VLDPE resins have a density ranging from about 0.880 to about 0.912 g/cm<sup>3</sup>,

more commonly from about 0.89 to about 0.91 g/cm<sup>3</sup>." (Id. col. 5:31-33.) U.S. Patent No. 5,756,219, obtained by Sergey Miro, states that "LLDPEs are ethylene-based copolymers generally having a density between about 0.89 and about 0.926." (U.S. Patent No. 5,756,219 col. 3:49-51, ECF No. 57-4 at PageID 2502.) These two examples indicate that the density range proposed by Defendants is more restrictive than necessary and bolsters Multilayer's argument that density ranges can overlap among the specific polyethylene resins stated in Claims 1 and 28.

Considering the parties' extrinsic evidence within the context of the intrinsic evidence of the claims language, the patent specification, and patents incorporated by reference in the '055 Patent, the Court finds that the general density ranges in the provided treatises are not useful to construing the term "linear low density polyethylene," as the patentee has stated specific densities for those resins in dependent Claims 18, 19, and 20. See Phillips, 415 F.3d at 1319 (Fed. Cir. 2005) ("[E]xtrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.").

As a result, the Court finds that, in the context of the '055 Patent, the branching architecture of the resins is a better distinguishing characteristic than density ranges.

**d. Court's Construction**

The Court therefore adopts in part both Multilayer's and Defendants' constructions for the term "linear low density polyethylene." The Court construes the term to mean "a class of copolymers of ethylene and alpha-olefins, which are characterized by relatively straight polymer chains with short chain branching and little or no long chain branching."

**7. "Metallocene-catalyzed linear low density polyethylene"  
(element (b) of Claim 1 and element (b) of Claim 28)**

Multilayer's proposed construction of the term is "a class of polymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching catalyzed using metallocene." (Pl.'s Br. at 18, ECF No. 53.)

Defendants' proposed construction of the term is "a class of copolymers of ethylene and alpha-olefins made using a type of metallocene catalyst." (Defs.' Br. at 25, ECF No. 54.)

The parties agree that m-LLDPE is catalyzed using metallocene. The parties disagree on whether to describe the resin as a "copolymer" or simply a "polymer." As stated supra Part IV.C.6.a., polyethylenes fall into categories of homopolymers or copolymers, and LLDPEs are more appropriately described as copolymers in order to distinguish them from LDPEs. As m-LLDPE is a type of LLDPE, only produced with a different

catalyst, the Court adopts Defendants' proposed construction in part, defining m-LLDPE as a "copolymer."

The parties also disagree on whether to include the branching characteristics of m-LLDPE in the proper construction of the term. Having construed LLDPE as "characterized by relatively straight polymer chains with short chain branching," see supra Pt. IV.C.6.d., the Court adopts in part Multilayer's construction.

In sum, the Court adopts in part both Multilayer's and Defendants' constructions, and construes the term "metallocene-catalyzed linear low density polyethylene" to mean "a class of copolymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching catalyzed using metallocene."

#### **8. Disputed Terms Relating to "melt"**

The parties dispute the meaning of three terms relating to the "melt" properties of the '055 Patent: "melt index," "melt flow index," and "melt index ratio."

##### **a. "melt index" (Claim 6 and Claim 7)**

Multilayer's proposed construction of the term is "the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition E." (Pl.'s Br. at 23, ECF No. 53.)

Defendants submit that the term "melt index" requires no construction and should be given its plain and ordinary meaning to a person of ordinary skill in the art. (Defs.' Br. at 26, ECF No. 54.)

Multilayer argues that not only does the intrinsic evidence of the patent itself identify the ASTM test as the method by which to determine melt index (Pl.'s Br. at 23, ECF No. 53 (citing '055 Patent col. 5:43-44, ECF No. 1-4)) but also the extrinsic evidence indicates that this test is "the industry recognized standard test method" for melt index and was used in prior-art patents secured by Defendants' own expert witness, Dr. Eichbauer (Pl.'s Resp. at 32, ECF No. 57; see '441 Patent col. 4:43-46, ECF No. 55-23 at PageID 2422 ("The melt index . . . should be in the range of from about 0.5 to about 10g/10 min., preferably from about 1 to about 5 g/10 min. as determined by ASTM D1238."); U.S. Patent No. 5,334,428 col. 6:18-22, ECF No. 57-13 ("By the use of the term low melt index linear low density polyethylene is meant an LLDPE resin having a melt index of less than about 2.5, as determined using the industry recognized standard test method, ASTM 1238 . . ." (emphasis added))).

Defendants argue that Multilayer's construction of the term "improperly reads into the claim language a specific test that is not found in the words of the claim." (Defs.' Br. at 26, ECF No. 54.) Defendants recognize that the patent specification

"explicitly discloses an ASTM test method to determine melt index," but contend that limiting the '055 Patent to only that test is incorrect because there are other tests used by those skilled in the art. (Id.)

As stated supra Part IV.C.3.a., it is well-established that in claim construction, the patentee can define terms used within the patent. Looking first to the claims themselves – Claims 6 and 7 – the language of the claims state a measurement for "melt index" for each outer layer as "0.2 to 10 dg/min," and for each inner layer as "0.5 to 10 dg/min." ('055 Patent col. 10:2-3,5-6, ECF No. 1-4.) The claims themselves do not define the term "melt index." Looking to the specification of the patent, it is evident that the term is clearly defined by the patentee: "The melt index of the layers of the films of the present invention is determined under ASTM D-1238, Condition E. It is measured at 190 degrees Celsius and 2.16 kilograms and reported as grams per 10 minutes." (Id. col. 5:43-46.) The Court finds the patentee has explicitly defined the term "melt index" and therefore acted as his own lexicographer.

As a result, the Court adopts Multilayer's construction of the term "melt index" to mean "the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition E."

b.     **"melt flow index"**  
              (Claim 23); and  
              **"melt index ratio"**  
              (Claim 28)

Multilayer's proposed construction of "melt flow index" is "the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition F." (Pl.'s Br. at 23, ECF No. 53.)

Multilayer's proposed construction of "melt index ratio" is "the ratio of melt flow index to melt index." (Id.)

Defendants' first argue that the terms "melt flow index" and "melt index ratio" should be held invalid under 35 U.S.C. § 112 as indefinite because, "[b]ased on the teachings of the '055 Patent, a person of ordinary skill in the art cannot resolve the ambiguity" of the term. (Defs.' Br. at 29, 31-32, ECF No. 54.) Alternatively, Defendants' propose that the need for construction of the term can be avoided "in light of the available remedy of filing a Certificate of Correction" with the USPTO to correct the ambiguity of the term. (Id.)

Defendants contend that one skilled in the art would not understand whether the terms "melt index," "flow index," or "melt flow ratio" define "melt flow index" (id. at 29), nor would one skilled in the art "understand whether or how 'melt index ratio' is defined by any or all of 'melt index,' 'flow index,' and 'melt flow index'" (id. at 31). Accordingly,

Defendants contend that the Court should hold these two terms indefinite.

Multilayer argues that the terms are not indefinite as they are amenable to construction. (Pl.'s Resp. at 33, ECF No. 57 (citing Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001))). Multilayer asserts that "a reasonable meaning for the terms [is] found right in the specification of the '055 patent." (Id.) Multilayer proposes that the patent teaches that "melt flow index is determined using ASTM D1238, Condition F, and that melt flow ratio is the ratio of melt flow index to melt index." (Id.)

Regarding indefiniteness, 35 U.S.C. § 112 requires that the patent specification contain

a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same . . . .

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

35 U.S.C. § 122(a), (b). The Federal Circuit has stated, "[T]he standard for assessing whether a patent claim is sufficiently definite to satisfy the statutory requirement [is] as follows: If one skilled in the art would understand the bounds of the claim when read in light of the specification, then the claim

satisfies section 112 paragraph 2." Exxon Research & Eng'g Co.,  
265 F.3d at 1375. "If the meaning of the claim is discernible,  
even though the task may be formidable and the conclusion may be  
one over which reasonable persons will disagree, we have held  
the claim sufficiently clear to avoid invalidity on  
indefiniteness grounds." Id. "Because a patent is presumed to  
be valid, the evidentiary burden to show facts supporting a  
conclusion of invalidity is one of clear and convincing  
evidence." Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325,  
1331 (Fed. Cir. 2010) (quoting Young v. Lumenis, Inc., 492 F.3d  
1336, 1345 (Fed. Cir. 2007)).

Because Defendants assert that the term "melt flow index"  
is "[i]nvalid under 35 U.S.C. § 112 as indefinite," Defendants  
have the burden of showing facts supporting a conclusion of  
invalidity. (See Defs.' Br. at 29, ECF No. 54.) The Court  
finds that Defendants have not met their burden to show the term  
"melt index ratio" is indefinite. The specification of the '055  
Patent states that "[f]low index is determined under ASTM D-  
1238, Condition F. It is measured at 190 degrees Celsius and 10  
times the weight used in determining the melt index, and  
reported as grams per 10 minutes." ('055 Patent col. 5:46-48,  
ECF No. 1-4.)

At the hearing, Multilayer asserted that the term "flow  
index" as used in the patent means "melt flow index" because "no

other . . . flow index is mentioned. There's nothing ambiguous about the term, that's the only thing that it could refer to is that portion of the specification." (Hr'g Tr. at PageID 2127:16-18.) Multilayer also asserted at the hearing that, regarding the use of the term "melt index ratio," the terms "melt index ratio" and "melt flow ratio" are synonymous because "there's no other ratio related to melt mentioned in the patent, and so this is the only thing, the only possible definition that it could have." (*Id.* at PageID 2127:20-24.)

Reviewing the specification of the '055 Patent, the terms "melt index" and "flow index" are related as the definition of "flow index" is "10 times the weight used in determining the melt index." As a result, one skilled in the art would understand that "flow index" as taught in the '055 Patent refers to "melt flow index." Further, the specification also teaches that "melt flow ratio" is the "ratio of flow index to melt index," and as no other ratios are contemplated within the '055 Patent, one skilled in the art would understand that "melt index ratio" as used in Claim 28 is synonymous with "melt flow ratio" as used in the specification. The terms are therefore amendable to a construction, and not indefinite.

Therefore, the Court adopts Multilayer's construction of the term "melt flow index" as "the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition F." The

Court also adopts Multilayer's construction of the term "melt index ratio" as "the ratio of melt flow index to melt index."

**9. "low density polyethylene homopolymers"**  
**(Claim 10)**

Multilayer's proposed construction of the term is "a class of polymers characterized by long chain and short chain branching." (Pl.'s Br. at 17-18, ECF No. 53.)

Defendants' first propose that the term is invalid under 35 U.S.C. § 112 as indefinite "because it depends from claim 1 but does not further limit the subject matter claimed in claim 1." (Defs.' Br. at 27, ECF No. 54.) Defendants argue that independent Claim 1 "defines five inner layers of the claimed film using a closed Markush group" of the resins LLDPE, VLDPE, ULDPE, and m-LLDPE. (Id. (citing '055 Patent element (b) of Claim 1, ECF No. 1-4).) Defendants note LDPE is not one of the resins listed in the Markush group. (Id.) As a result, Defendants argue dependent Claim 10's resin LDPE, a resin that is not listed in the Markush group in element (b) of independent Claim 1, improperly broadens the scope of an independent claim and must be found invalid.

Defendants also propose Claim 10 is indefinite because its "recitation of LDPE homopolymers with a density range of 'about 0.86 to 0.94 g/cc' is inconsistent and technically incorrect." (Id. at 28.) Defendants argue that the range of densities

claimed in Claim 10 is overly broad, as it "covers and includes ULDPE, VLDPE, and LLDPE," as well as LDPE, which should only have a density range of "about 0.910 g/cc to 0.925 g/cc or 0.915 g/cc to 0.93 g/cc." (Id.) Defendants' contend that it is "scientifically unsound for the patentee to claim LDPE as having a density range that extends below 0.910 g/cc." (Id.)

Alternatively, Defendants' proposed construction of the term is "a class of polymer formed entirely of ethylene monomers, the polymer chains being characterized by a branched polymer backbone consisting of short-chain branches and long-chain branches." (Id. at 27.)

Multilayer reasserts its argument that the Markush group in Claim 1 must be "open" in order to sustain the validity of all the dependent claims in the '055 Patent. (Pl.'s Resp. at 23-24, ECF No. 57.) Multilayer notes that LDPE is listed as a possible blend with LLDPE in dependent Claims 18 and 19 and that LDPE is discussed as a suitable resin in the specification of the '055 Patent. (Id. at 23 (citing '055 Patent col. 4:53-61, 6:14-18, ECF No. 1-4).) As a result, Multilayer argues that the Markush group of Claim 1 must be open, as that is the only construction that includes LDPE and comports with the "claims, specification, and commonly understood meanings of the terms in the patent."

(Id. at 24.)

The Court previously found that the Markush group in element (b) of Claim 1, which states the group of resins from which the inner layers are composed, is closed. (See supra Pt. IV.C.5.) As stated in 35 U.S.C. § 112(d), dependent claims must "contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed." Claim 10, however, depends from Claim 1, which the Court has determined contains a closed Markush group which limits the possible resins in the five recited inner layers to LLDPE, VLDPE, ULDPE, and m-LLDPE.

Review of the specification indicates that the patentee stated, "Suitable polyethylene resins used for strength are" LLDPE, VLDPE, ULDPE, and m-LLDPE, which is reflected in element (b) of Claim 1. (See '055 Patent col. 4:33-46, ECF No. 1-4.) The specification also states, in a separate paragraph, that LDPE is "suitable for use in the inner five layers for obtaining strength properties." (See id. col. 4:53-61.) As the patentee listed LDPE as a separate resin suitable for strength, the Court finds the patentee distinguished it from the other resins, and LDPE is, therefore, not included within the prior and separate listing of resins suitable for strength (LLDPE, VLDPE, ULDPE, and m-LLDPE). To find otherwise would be to risk rendering LDPE a superfluous term.

Review of the claims indicates that the Markush group in element (b) of Claim 1 is closed, and LDPE is not included therein. LDPE is only listed in dependent Claim 10, which, pursuant to 35 U.S.C. § 112(d) must present a "further limitation" on the claim from which it depends. The Court finds it does not. Recognizing the Federal Circuit's guidance directing district courts to avoid invalidating claims, the Court finds that the rule from Exxon Research & Eng'g Co., see supra Pt. IV.C.8.b., is inapplicable in the instant case. The issue before the Court is not whether the term "low density polyethylene homopolymers" is indefinite, but rather invalidity resulting from Claim 10 itself. As a dependent claim, Claim 10 attempts to improperly broaden the scope of the closed Markush Group in element (b) of Claim 1. In Pfizer, Inc. v. Ranbaxy Labs., Ltd., 457 F.3d 1284 (Fed. Cir. 2006), the Federal Circuit found a dependent claim invalid under § 112(d) for attempting to claim subject matter outside the scope of the independent claim from which it depended. Id. at 1292. Like the court in Pfizer, this Court recognizes that "the patentee was attempting to claim what might otherwise have been patentable subject matter" and that including LDPE in the Markush group in element (b) of Claim 1 or drafting an additional independent claim may have met the § 112(d) requirements. Id. "But, we 'should not rewrite claims

to preserve validity.'" Id. (quoting Nazomi Commc'ns, Inc. v. Arm Holdings, PLC, 403 F.3d 1364, 1368 (Fed. Cir. 2005)).

As a result, dependent Claim 10, which claims "[t]he multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one said inner layer comprises low density polyethylene homopolymers" is invalid pursuant to 35 U.S.C. § 112(d) as it relates to the Markush group applied to the inner five layers of a seven-layer stretch-wrap film stated in element (b) of Claim 1.

Regarding a film of additional inner layers not subject to the Markush group in element (b) of Claim 1, however, LDPE could be a possible polyethylene in the stretch-wrap film. (See Defs.' Resp. at 20, ECF No. 58.) For this reason, the Court finds the term should be construed.

The term "low density polyethylene homopolymers" is not defined within the patent, but the language specifically limits any construction of LDPE to "homopolymers." Reviewing the extrinsic sources, LDPE is produced when an "ethylene monomer combines at high pressures and temperatures to form long polymer chains with many branches." (The Film Extrusion Manual at 453, ECF No. 54-2 at PageID 773.) Accordingly, the Court agrees with Defendants that LDPE, as it is not included in the Markush group in element (b) of Claim 1, must be distinguished from those

resins that are included in the Markush group - namely LLDPE, VLDPE, ULDPE, and m-LLDPE. (See Defs.' Br. at 28, ECF No. 54.)

Having determined the polyethylenes contemplated for use in the '055 Patent are better distinguished by their branching architecture and that LDPE is produced from ethylene monomers, the Court adopts Defendants' construction. Therefore, as it relates to films of more than seven layers where the inner layers are not subject to the Markush group in element (b) of Claim 1, the Court construes the term "low density polyethylene homopolymers" to mean, "a class of polymer formed entirely of ethylene monomers, the polymer chains being characterized by a branched polymer backbone consisting of short-chain branches and long-chain branches."

**10. "The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins."**  
**(Claim 24)**

Multilayer's proposed construction is "the multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a mixture of at least two of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, or metallocene-catalyzed linear low density polyethylene resins." (Pl.'s Br. at 22-23, ECF No. 53.)

Defendants' submit that the term requires no construction and should be given its plain and ordinary meaning to a person of ordinary skill in the art. (Defs.' Br. at 30, ECF No. 54.)

Multilayer argues, consistent with its previous argument that the Markush groups in both elements (a) and (b) of Claim 1 were "open," that both independent claims allow blends of the listed resins within a layer. (Pl.'s Br. at 22-23, ECF No. 53.) Multilayer asserts that its construction is the "natural construction" of the term "that comports with the intrinsic evidence and common sense." (Pl.'s Resp. at 31, ECF No. 57.) Having determined that the Markush groups in Claim 1 are closed, the Court declines to adopt Multilayer's proposed construction.

Defendants' argue that the Court need not construe the term and instead asserts the Claim's plain meaning, which can be "readily derived by reading Claim 24 in light of Claim 1 from which it depends." (Defs.' Br. at 30, ECF No. 54.) Defendants explain that the language of Claim 24 - "blend of at least two of said resins" - "can be a blend of at least two resins within one class of resins, or it can be a blend of two resins from different classes in a layer that is not subject to a Markush group limitation." (Id. at 31.) For example, Defendants illustrate that LLDPE is a class of resins listed in Claim 1, that this LLDPE resin is, therefore, the "said resins" of Claim 24, and that an inner layer of the stretch-wrap film could

consist of "a blend of C6 (hexene) LLDPE resin and a C8 (octene) LLDPE resin," thereby falling within the scope of dependent Claim 24. (Id. at 30.) Defendants also reiterate that while one outer layer is subject to the Markush group of Claim 1, and therefore cannot contain blends of resins from different classes, the other outer layer is not subject to the Markush group limitation, thus a blend of two classes of resins may be present in that outer layer. (Id.) Finally, Defendants note that Multilayer's proposed construction is improper because it "allows m[-]LLDPE resins to be a part of one of the 'blends' that can be used in the outer cling layer," which is contrary to the language in element (a) of Claim 1 which "omits m[-]LLDPE resins as a specified alternative choice of resins for the outer cling layer," and contrary to the language in element (b) of Claim 1, which "expressly lists m[-]LLDPE resins as a specified alternative choice for inner layers." (Defs.' Resp. at 32, ECF No. 58.)

"A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute." O2 Micro Int'l Ltd., 521 F.3d at 1361. Having determined that Multilayer's proposed construction is inappropriate in light of the Markush groups being "closed," and

that Defendants' proposed "plain meaning" does not resolve the parties' dispute, "claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit." *Id.*

The Court agrees that the meaning of Claim 24 can be derived by reading it with respect to Claim 1, but finds that construing the term will be helpful to the jury. Having determined the Markush groups of the claims are closed and do not contemplate blends of different resins, the Court construes the claims with these limitations in mind. As a result, the Court construes "the multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins" to mean "the multi-layer thermoplastic stretch wrap film of Claim 1, wherein an outer layer comprises a blend of at least two of the resins LLDPE, VLDPE, and ULDPE; or where an additional inner layer may include a blend of at least two of the resins LLDPE, VLDPE, ULDPE, and m-LLDPE."

**11. "resin additive"  
(Claim 32)**

Multilayer's proposed construction is "a substance that is incorporated into a resin." (Pl.'s Br. at 18, ECF No. 53.)

Defendants' proposed construction is "a substance that by its properties is not typically by itself formed into a stretch

wrap film layer, and that is compounded into a resin to modify its useful functional properties, and which consists of 10% or less of a layer." (Defs.' Br. at 32, ECF No. 54.)

Multilayer argues that the meaning of this term is "readily apparent" and that "[t]here is nothing in the claims, specification, or prosecution history that would cause one skilled in the art to give the term any other meaning than its commonly understood meaning." (Pl.'s Br. at 18, ECF No. 53.)

Defendants argue that because Claim 32 was added by amendment during the Second Ex Parte Reexamination, it cannot be construed to expand the scope of Claim 1 and it "must be clear to one of skill in the art with knowledge of the '055 Patent and extrinsic evidence." (Defs.' Br. at 32, ECF No. 54.)

Defendants argue that one skilled in the art would recognize that a "resin additive" could not include "a resin itself," as including "resin" in the construction of the term "resin additive" would make the term indefinite and ambiguous where it would be impossible to distinguish what was a "resin" and what was a "resin additive." (*Id.* at 32-33 & n.14.) Additionally, Defendants assert that the term "resin additive" cannot contemplate including "resins" within the scope of the term "additives," because Claims 18, 19, and 24 "use the term 'blend' to describe incorporation of one resin into another resin." (*Id.* at 33.)

Defendants also argue that the intrinsic evidence of the specification and additional extrinsic evidence indicates that a "resin additive" must "modify the useful functional properties of the resin into which it is compounded." (*Id.* at 33-34.)

Defendants contend that the construction of "resin additive" must limit the amount of additives found in a layer to 10% or less of the weight of an individual layer, as stated in the '441 patent, incorporated by reference into the '055 Patent. (*Id.*)

As an initial matter, the Court agrees with Defendants that Claim 32, as an amendment, cannot expand the scope of the claim on which it depends. See 35 U.S.C. § 305 ("No proposed amended or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding under this chapter."). Further, the Court agrees that in this circumstance, one skilled in the art would have knowledge of both the '055 Patent and extrinsic evidence. See Helmsderfer v. Bobrick Washroom Equip., Inc., 527 F.3d 1379, 1381 (Fed. Cir. 2008) ("To construe a claim term, a court must determine the meaning of any disputed words from the perspective of one of ordinary skill in the pertinent art at the time of filing." (citing Phillips, 415 F.3d at 1313)).

The Court finds that the term "resin additive" must exclude resins themselves, as allowing a resin to also be a "resin additive" would render the term ambiguous in scope as "additive"

must have a different meaning from the term "blend" as used in Claims 18, 19, and 24. Seachange Int'l, Inc. v. C-COR, Inc., 413 F.3d 1361, 1368 (Fed. Cir. 2005) ("[D]ifferent words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope." (internal quotation marks omitted)); accord Spine Solutions, Inc. v. Medtronic Sofamor Danek, Inc., No. 07-2175 JPM-dkv, 2008 WL 4831770, at \*7 (W.D. Tenn. July 2, 2008) (McCalla, C.J.).

Regarding Defendants' proposed construction that the resin additive must "consist[] of 10% or less of a layer," the Court finds the intrinsic evidence does not support this construction. First, the claims themselves do not limit the amount of resin additive present in the stretch-wrap film. Second, while the '055 Patent incorporates by reference the '441 Patent (see '055 Patent col. 4:20-21, ECF No. 1-4), which states that "[t]he optional cling additive may be present in the first and second layers in a concentration of from about 0.5 to about 10 weight percent of the resin" ('441 Patent col. 6:62-64, ECF No. 55-23 at PageID 2423), the '055 Patent also incorporates by reference other patents allowing resin additives expressed in wider weight-percentage ranges (see '055 Patent col. 3:31-32, ECF No. 1-4 (citing U.S. Patent No. 5,212,001 col. 7:56-59, ECF No. 57-9, ("The tackifier [additive] preferably comprises from about 1% to about 20%, preferably from about 5% to about 15%, by weight

of the cling layer.")); U.S. Patent No. 5,154,981 col. 4:15-18, ECF No. 57-10 ("The tackifying additive preferably comprises from about 1% to about 30%, more preferably from about 5% to about 15%, by weight of the cling layer."))). With such wide-ranging weight percentages present in the patents incorporated by reference, the Court finds that the intrinsic evidence does not support Defendants' limitation that the resin additive be "10% or less of a layer."

Therefore, the Court construes the term "resin additive" to mean "a substance that by its properties is not typically by itself formed into a stretch wrap film layer and that is compounded into a resin."

#### **V. Conclusion**

For the foregoing reasons, the Court construes the following terms:

CLAIM TERM	COURT'S CONSTRUCTION
"thermoplastic stretch wrap film" (Claim 1; Claim 28)	"thermoplastic film having cling and elastic properties such that when it is stretched around an object or objects, it will adhere to itself and attempt to relax, therefore applying a compressive force to the object or objects"
"layer" (Claim 1; Claim 28)	"a polymer composition within the multilayer polymer structure lying over or under another"

CLAIM TERM	COURT'S CONSTRUCTION
<p>"at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins"</p> <p>(element (a) of Claim 1; element (a) of Claim 28)</p>	<p>"at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 grams/inch as tested using ASTM D5458 and such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins"</p>
<p>"containing seven <u>separately identifiable</u> polymeric layers, comprising,"</p> <p>('055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)</p>	<p>"including at least seven physically distinguishable polymeric layers that are distinct on a compositional level from adjacent polymeric layers, comprising"</p>

CLAIM TERM	COURT'S CONSTRUCTION
<p>"five <u>identifiable</u> inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins"</p> <p>(element (b) of Claim 1; element (b) of Claim 28) ('055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)</p>	<p>"each of five identifiable inner layers must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, ultra low density polyethylene resins, or metallocene-catalyzed linear low density polyethylene resins"</p>
<p>"linear low density polyethylene"</p> <p>(Claim 1; Claim 28)</p>	<p>"a class of copolymers of ethylene and alpha-olefins, which are characterized by relatively straight polymer chains with short chain branching and little or no long chain branching"</p>
<p>"metallocene-catalyzed linear low density polyethylene"</p> <p>(element (b) of Claim 1; element (b) of Claim 28)</p>	<p>"a class of copolymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching catalyzed using metallocene"</p>

CLAIM TERM	COURT'S CONSTRUCTION
"melt index" (Claims 6; 7)	"the measure of the ease of flow of a molten polymer as measured by ASTM [American Society for Testing and Materials ("ASTM")] D1238 Condition E"
"melt flow index" (Claim 23)	"the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition F"
"melt index ratio" (Claim 28)	"the ratio of melt flow index to melt index"
"low density polyethylene homopolymers" (Claim 10)	<p>Invalid pursuant to 35 U.S.C. § 112(d) as found in the inner layers as recited in element (b) of Claim 1;</p> <p>in additional inner layers not recited in element (b) of Claim 1: "a class of polymer formed entirely of ethylene monomers, the polymer chains being characterized by a branched polymer backbone consisting of short-chain branches and long-chain branches"</p>

CLAIM TERM	COURT'S CONSTRUCTION
<p>"The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins."  (Claim 24)</p>	<p>"The multi-layer thermoplastic stretch wrap film of Claim 1, wherein an outer layer comprises a blend of at least two of the resins LLDPE, VLDPE, and ULDPE; or where an additional inner layer may include a blend of at least two of the resins LLDPE, VLDPE, ULDPE, and m-LLDPE.</p>
<p>"resin additive"  (Claim 32)</p>	<p>"a substance that by its properties is not typically by itself formed into a stretch wrap film layer and that is compounded into a resin"</p>

**IT IS SO ORDERED**, this 8th day of November, 2013.

/s/ JON P. McCALLA \_\_\_\_\_  
U.S. DISTRICT COURT JUDGE

**APPENDIX A**

<b>CLAIM TERM</b>	<b>MULTILAYER'S PROPOSED CONSTRUCTION</b>	<b>DEFENDANTS' PROPOSED CONSTRUCTION</b>	<b>COURT'S CONSTRUCTION</b>
"thermoplastic stretch wrap film" (Claim 1; Claim 28)	"thermoplastic film having cling and elastic properties such that when it is stretched around an object or objects, it will adhere to itself and attempt to relax, therefore applying a compressive force to the object or objects"	Not a proper limitation because it is a preamble description of the film's use;  if it is a limitation, then it should be construed as: "a film suitable for being stretched around, and applying a compressive force to, an object or objects wrapped thereby"	"thermoplastic film having cling and elastic properties such that when it is stretched around an object or objects, it will adhere to itself and attempt to relax, therefore applying a compressive force to the object or objects"
"layer" (Claim 1; Claim 28)	"an arrangement or combination of ingredients within the multilayer polymer structure lying over or under another"	"a polymer composition within the multilayer polymer structure lying over or under another"	"a polymer composition within the multilayer polymer structure lying over or under another"

CLAIM TERM	MULTILAYER'S PROPOSED CONSTRUCTION	DEFENDANTS' PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
"at least one of which having a cling performance of at least 100 grams/inch, said outer layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, and ultra low density polyethylene resins" (element (a) of Claim 1; element (a) of Claim 28)	"made from linear low density polyethylene, very low density polyethylene, ultra low density polyethylene resin, or blends thereof, at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 g/inch as tested using ASTM D5458"	"at least one outer layer must have 100 grams/inch cling performance and such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins"	"at least one of said outer layers having sufficient cling such that the film exhibits cling properties of at least 100 grams/inch as tested using ASTM D5458 and such layer must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, or ultra low density polyethylene resins"

<b>CLAIM TERM</b>	<b>MULTILAYER'S PROPOSED CONSTRUCTION</b>	<b>DEFENDANTS' PROPOSED CONSTRUCTION</b>	<b>COURT'S CONSTRUCTION</b>
"containing seven <u>separately identifiable</u> polymeric layers, comprising," ('055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)	"including at least seven physically distinguishable polymeric layers, comprising"	"including at least seven polymeric layers that are structurally distinct and compositionally the same or structurally distinct and compositionally different when compared to an adjacent layer"	"including at least seven physically distinguishable polymeric layers that are distinct on a compositional level from adjacent polymeric layers, comprising"

CLAIM TERM	MULTILAYER'S PROPOSED CONSTRUCTION	DEFENDANTS' PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
"five <u>identifiable</u> inner layers, with each layer being selected from the group consisting of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, and metallocene-catalyzed linear low density polyethylene resins" (element (b) of Claim 1; element (b) of Claim 28) ('055 Patent, First Ex Parte Reexamination Certificate (Jan. 2, 2007), Claim 1, ECF No. 1-4 at PageID 24; Certificate of Correction (Apr. 7, 2009) at PageID 21, ECF No. 1-4)	"made from linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, metallocene-catalyzed linear low density polyethylene resin, or blends thereof"	"each of five identifiable inner layers must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, ultra low density polyethylene resins, or metallocene-catalyzed linear low density polyethylene resins"	"each of five identifiable inner layers must contain only one class of the following resins, and no other resin(s): linear low density polyethylene resins, very low density polyethylene resins, ultra low density polyethylene resins, or metallocene-catalyzed linear low density polyethylene resins"

CLAIM TERM	MULTILAYER'S PROPOSED CONSTRUCTION	DEFENDANTS' PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
"linear low density polyethylene" (Claim 1; Claim 28)	"a class of polymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching"	"a class of copolymers of ethylene and alpha-olefins made using a type of Ziegler-Natta catalyst, which are characterized by relatively straight polymer chains with short chain branching and little or no long chain branching of the type found in LDPE and having a density of between about .915 and .940 g/cc"	"a class of copolymers of ethylene and alpha-olefins, which are characterized by relatively straight polymer chains with short chain branching and little or no long chain branching"
"metallocene-catalyzed linear low density polyethylene" (element (b) of Claim 1; element (b) of Claim 28)	"a class of polymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching catalyzed using metallocene"	"a class of copolymers of ethylene and alpha-olefins made using a type of metallocene catalyst"	"a class of copolymers of ethylene and alpha-olefins characterized by relatively straight polymer chains with short chain branching catalyzed using metallocene"

<b>CLAIM TERM</b>	<b>MULTILAYER'S PROPOSED CONSTRUCTION</b>	<b>DEFENDANTS' PROPOSED CONSTRUCTION</b>	<b>COURT'S CONSTRUCTION</b>
"melt index" (Claims 6; 7)	"the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition E"	Plain meaning	"the measure of the ease of flow of a molten polymer as measured by ASTM [American Society for Testing and Materials ("ASTM")] D1238 Condition E"
"melt flow index" (Claim 23)	"the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition F"	Invalid under 35 U.S.C. § 112 as indefinite; alternatively, Defendants object to this claim term being construed in light of the available remedy of filing a Certificate of Correction	"the measure of the ease of flow of a molten polymer as measured by ASTM D1238 Condition F"

<b>CLAIM TERM</b>	<b>MULTILAYER'S PROPOSED CONSTRUCTION</b>	<b>DEFENDANTS' PROPOSED CONSTRUCTION</b>	<b>COURT'S CONSTRUCTION</b>
"melt index ratio" (Claim 28)	"the ratio of melt flow index to melt index"	Invalid under 35 U.S.C. § 112 as indefinite;  alternatively, Defendants object to this claim term being construed in light of the available remedy of filing a Certificate of Correction	"the ratio of melt flow index to melt index"

<b>CLAIM TERM</b>	<b>MULTILAYER'S PROPOSED CONSTRUCTION</b>	<b>DEFENDANTS' PROPOSED CONSTRUCTION</b>	<b>COURT'S CONSTRUCTION</b>
"low density polyethylene homopolymers" (Claim 10)	"a class of polymers of ethylene characterized by long chain and short chain branching"	Invalid under 35 U.S.C. § 112 as indefinite; alternatively, "a class of polymer formed entirely of ethylene monomers, the polymer chains being characterized by a branched polymer backbone consisting of short-chain branches and long-chain branches"	Invalid pursuant to 35 U.S.C. § 112(d) as found in the inner layers as recited in element (b) of Claim 1;  in additional inner layers not recited in element (b) of Claim 1: "a class of polymer formed entirely of ethylene monomers, the polymer chains being characterized by a branched polymer backbone consisting of short-chain branches and long-chain branches"

CLAIM TERM	MULTILAYER'S PROPOSED CONSTRUCTION	DEFENDANTS' PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
"The multi-layer, thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a blend of at least two of said resins." (Claim 24)	"the multi-layer thermoplastic stretch wrap film of claim 1, wherein at least one layer comprises a mixture of at least two of linear low density polyethylene, very low density polyethylene, ultra low density polyethylene, or metallocene-catalyzed linear low density polyethylene resins"	Plain meaning	"the multi-layer thermoplastic stretch wrap film of Claim 1, wherein an outer layer comprises a blend of at least two of the resins LLDPE, VLDPE, and ULDPE; or where an additional inner layer may include a blend of at least two of the resins LLDPE, VLDPE, ULDPE, and m-LLDPE"
"resin additive" (Claim 32)	"a substance that is incorporated into a resin"	"a substance that by its properties is not typically by itself formed into a stretch wrap film layer, and that is compounded into a resin to modify its useful functional properties, and which consists of 10% or less of a layer"	"a substance that by its properties is not typically by itself formed into a stretch wrap film layer and that is compounded into a resin"